

OM of: us-10-726-967a-1 to: rscp2ndb.\* out\_format : pfs

Date: Wed Aug 3 11:58:53 2005

About: Results were produced by the Gencore software, version 5.1.6.  
Copyright (c) 1993-2005 Compugen Ltd.

#### Command line parameters:

-MODE=frame+g2n.model -DEV=soft -Q=us-10-726-967a-1 -DB=rscp2ndb -SUFFIX=pfs  
-OUT=10726967-1\_22-41vSID52htst.p2n.rst -MINMATCH=0.1 -LOOPEL=0 -LOOPEXT=0  
-UNITS=bits -START=22 -END=41 -MATRIX=blomsum62 -TRANS=human40.cbl -LIST=500  
-DOCALLIGN=200 -THR SCORE=pct -THR MAX=100 -ALIGN=500 -MODE=LOCAL  
-OUTPMT=pfs -NOR=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000 -NCPUI=6  
-NO\_XLDPX -NES SCORES=0 -LONGLOG -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6  
-FGAPEXT=7 -XGAPOP=10 -XGAPEXT=0.5 -DELOP=6 -DELEXT=7

#### Search information:

Query: us-10-726-967a-1  
Query length: 20  
Database: rscp2ndb.\*  
Database sequences: 12  
Database length: 32050  
Search time (sec): 1

#### Score list:

Sequence	Strd	Orig	ZScore	EScore	Len	Documentation	...
rscp2ndb:AY417360	+	104.00	75.89	0.4823	1506	ACCESSION:AY417360	Homo sapien
rscp2ndb:BX376891	+	87.00	70.83	1.01	1123	ACCESSION:BX376891	Homo sapien
rscp2ndb:AY417362	+	77.00	64.48	2.01	1506	ACCESSION:AY417362	Mus muscul
rscp2ndb:AK041285	+	77.00	60.49	3.27	3634	ACCESSION:AK041285	Mus muscul
rscp2ndb:AK041464	+	77.00	60.22	3.37	3859	ACCESSION:AK041464	Mus muscul
rscp2ndb:AK031112	+	77.00	60.20	3.38	3877	ACCESSION:AK031112	Mus muscul
rscp2ndb:AK082317	+	77.00	60.00	3.46	4048	ACCESSION:AK082317	Mus muscul
rscp2ndb:AK046175	+	77.00	59.94	3.48	4101	ACCESSION:AK046175	Mus muscul
rscp2ndb:AK082230	+	68.00	56.48	5.21	3805	ACCESSION:AK082230	Mus muscul
rscp2ndb:AK080498	+	60.00	53.01	7.61	3880	ACCESSION:AK080498	Mus muscul
rscp2ndb:BX376891	-	33.00	48.06	12.32	1123	ACCESSION:BX376891	Homo sapien
rscp2ndb:AK041285	-	33.00	41.90	19.09	3634	ACCESSION:AK041285	Mus muscul
rscp2ndb:AK082230	-	33.00	41.69	19.30	3805	ACCESSION:AK082230	Mus muscul
rscp2ndb:AK041464	-	33.00	41.63	19.36	3859	ACCESSION:AK041464	Mus muscul
rscp2ndb:AK031112	-	33.00	41.61	19.38	3877	ACCESSION:AK031112	Mus muscul
rscp2ndb:AK080498	-	33.00	41.60	19.38	3880	ACCESSION:AK080498	Mus muscul
rscp2ndb:AK082317	-	33.00	41.41	19.57	4048	ACCESSION:AK082317	Mus muscul
rscp2ndb:AK046175	-	33.00	41.35	19.62	4101	ACCESSION:AK046175	Mus muscul
rscp2ndb:AY417360	-	32.00	45.47	15.21	1506	ACCESSION:AY417360	Homo sapien
rscp2ndb:AY417360	+	28.00	50.44	9.89	346	ACCESSION:AY417360	Mus muscul
rscp2ndb:AY417360	+	28.00	50.20	10.12	365	ACCESSION:AY417360	Mus muscul
rscp2ndb:AY417360	-	27.00	50.01	10.30	346	ACCESSION:AY417360	Mus muscul
rscp2ndb:AY417360	-	27.00	49.77	10.54	365	ACCESSION:AY417360	Mus muscul
rscp2ndb:AY417362	-	27.00	43.35	17.57	1506	ACCESSION:AY417362	Mus muscul

#### Sequence documentation:

LOCUS AY417360 1506 bp DNA linear GSS 17-DEC-2003

DEFINITION Homo sapiens BACE gene, VIRTUAL TRANSCRIPT, partial sequence,

genomic survey sequence.

ACCESSION AY417360

VERSION AY417360.1 GI:39773320

KEYWORDS GSS.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE 1 (bases 1 to 1506)

Clark,A.G., Glanowski,S., Nielson,R., Thomas,P., Kejariwal,A.,

Todd,M.A., Tanenbaum,D.M., Civejlo,D.R., Lu,F., Murphy,B.,

Ferriera,S., Wang,G., Zheng,X.H., White,T.J., Smitsky,D.J.,

Adams,M.D. and Cargill,M.

Inferring nonneutral evolution from human-chimp-mouse orthologous

gene trios

Science 302 (5652), 1960-1963 (2003)

14673302

2 (bases 1 to 1506)

Clark,A.G., Glanowski,S., Nielson,R., Thomas,P., Kejariwal,A.,

Todd,M.A., Tanenbaum,D.M., Civejlo,D.R., Lu,F., Murphy,B.,

Ferriera,S., Wang,G., Zheng,X.H., White,T.J., Smitsky,D.J.,

Adams,M.D. and Cargill,M.

Direct Submission

Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive,

Rockville, MD 20850, USA

This sequence was made by sequencing genomic exons and ordering

them based on alignment.

location/Qualifiers

1..1506

/organism="Homo sapiens"

/mol\_type="genomic DNA"

/db\_xref="taxon:9606"

<1..>1506

/gene="BACE"

/locus\_tag="HCM6198"

Alignment of: us-10-726-967a-1 x AY417360 ..

Alignment segment 1/1: (+)

Matching Length: 104.00

Matching Percent Similarity: 100.00

Total Percent Similarity: 100.00

Gaps: 0

Alignment:

22 ThrGlnIaGlyIleArgLeuProIleuArgSerGlyLeuGlyAlaIlePr 38

64 ACCGACGACGGGATCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 113

38 GLeuGlyLeu 41

114 CCGGGGGCTG 123

Sequence name: rscp2ndb:BX376891

Sequence documentation:

LOCUS BX376891 1123 bp mRNA linear EST 23-APR-2004

DEFINITION BX376891 Homo sapiens NEUROBLASTOMA COT 50-NORMALIZED Homo sapiens

CDNA clone CS00D007Y1P18 5-PRIME, mRNA sequence.

ACCESSION BX376891

VERSION BX376891.2 GI:46556538

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE 1 (bases 1 to 1123)

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

AUTHORS Li, W.B., Gruber, C., Jesse, J. and Polayes, D.  
 TITLE Full-length cDNA libraries and normalization  
 JOURNAL Unpublished (2001)  
 COMMENT On May 8, 2003 this sequence version replaced gi:30434929.

Contact: Genoscope  
 Genoscope - Centre National de Sequencage  
 2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE  
 Email: seque@genoscope.cns.fr, Web: www.genoscope.cns.fr  
 1st strand cDNA was primed with a NotI-oligo (dT) primer. Five prime  
 end enriched, double-strand cDNA was digested with Not I and cloned  
 into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library  
 was normalized. Library was constructed by Life Technologies, a  
 division of Invitrogen. This sequence belongs to sequence cluster  
 5902.r

For more information about this cluster, see  
 http://www.genoscope.cns.fr/cdnas?c=CS0DD007DH09QPI&c=5902.r.

FEATURES  
 source  
 location/Qualifiers

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 /organism="Homo sapiens"  
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 /note="1st strand cDNA was primed with a NotI-oligo (dT)  
 primer. Five prime end enriched, double-strand cDNA was  
 digested with Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized."

Alignment of: us-10-726-967a-1 x BX376891 ..

Alignment segment 1/1: (+)

Matching	Quality:	87.00	Total length:	1.01
Percent Similarity:	95.00	Matching Percent Identity:	95.00	
Total Percent Similarity:	95.00	Total Percent Identity:	95.00	
Gaps:	0			

Alignment:

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22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
501 ACCGACGACGCGATCCGCTCCCTCCGCGACGCGCTCGGCGCCGCC 549
38 oLeuGlyLeu
|||||
550 CCTGGGCGCTC
559

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Sequence name: rerp2ndb:AY417362

Sequence documentation:

LOCUS AY417362 1506 bp DNA linear GSS 17-DEC-2003  
 DEFINITION Mus musculus BACE gene, VIRTUAL TRANSCRIPT, partial sequence,  
 genomic survey sequence.  
 ACCESSION AY417362  
 VERSION AY417362.1 GI:39773322  
 KEYWORDS GSS.  
 SOURCE Mus musculus (house mouse)  
 ORGANISM Mus musculus  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

REFERENCE  
 AUTHORS Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A.,  
 Todd, M.A., Tanenbaum, D.M., Civeille, D.R., Lu, F., Murphy, B.,  
 Ferreira, S., Wang, G., Zheng, X.H., White, T.J., Shtinsky, J.J.,  
 Adams, M.D. and Cargill, M.  
 Inferring nonneutral evolution from human-chimp-mouse orthologous  
 gene trios

JOURNAL  
 PUBMED Science 302 (5652), 1960-1963 (2003)  
 REFERENCE 14671302  
 AUTHORS 2 (bases 1 to 1506)  
 Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A.,

Todd, M.A., Tanenbaum, D.M., Civeille, D.R., Lu, F., Murphy, B.,  
 Ferreira, S., Wang, G., Zheng, X.H., White, T.J., Shtinsky, J.J.,  
 Adams, M.D. and Cargill, M.  
 TITLE Direct Submission  
 JOURNAL Submitted (16-NOV-2003) Celera Genomics, 45 West Gate Drive,  
 Rockville, MD 20850, USA  
 COMMENT This sequence was made by sequencing genomic exons and ordering  
 them based on alignment.  
 FEATURES  
 source  
 location/Qualifiers

1..1506  
 /organism="Mus musculus"  
 /mol\_type="genomic DNA"  
 /db\_xref="taxon:10090"  
 <1..>1506  
 /gene="BACE"  
 /locus\_tag="HCW6198"

Alignment of: us-10-726-967a-1 x AY417362 ..

Alignment segment 1/1: (+)

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Percent Similarity:	90.00	Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00	Total Percent Identity:	80.00	
Gaps:	0			

Alignment:

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22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCATCTCGGCGATCCGCTCCCTCCGCGACGCGCTCGGCGCCGCC 113
38 oLeuGlyLeu
|||||
114 CCTGGGCGCTC
123

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Sequence name: rerp2ndb:AK041285

Sequence documentation:

LOCUS AK041285 3634 bp mRNA linear HTC 03-APR-2004  
 DEFINITION Mus musculus adult male aorta and vein cDNA, RIKEN full-length  
 enriched library, clone:A530097B07 product:beta-site App cleaving  
 enzyme, full insert sequence.  
 ACCESSION AK041285  
 VERSION AK041285.1 GI:26334342  
 KEYWORDS HTC, CAP trapper.  
 SOURCE Mus musculus (house mouse)  
 ORGANISM Mus musculus  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

REFERENCE  
 AUTHORS Carninci, P. and Hayashizaki, Y.  
 TITLE High-efficiency full-length cDNA cloning  
 JOURNAL Meth. Enzymol. 303, 19-44 (1999)  
 MEDLINE 99279253  
 PUBMED 10349636  
 REFERENCE 2

3  
 Itch, M., Kono, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y.  
 Normalization and subtraction of cap-trapper-selected cDNAs to  
 prepare full-length cDNA libraries for rapid discovery of new genes  
 Genome Res. 10 (10), 1617-1630 (2000)  
 MEDLINE 20499374  
 PUBMED 11042159  
 REFERENCE 3

AUTHORS Shibata, K., Itch, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P.,  
 Kono, H., Akiyama, J., Nishi, K., Kitsuai, T., Tashiro, H., Itch, M.,  
 Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishino, T., Harada, A.,  
 Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K.,  
 Fujiwara, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Matsubara, S.,  
 Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsura, S., Kawai, J.,  
 Okazaki, Y., Muramatsu, M., Inoue, Y., Kita, A. and Hayashizaki, Y.



TITLE	JOURNAL	PUBLISHED	REFERENCE	AUTHORS
RIKEN integrated sequence analysis (RISA) system--384-format - Sequencing pipeline with 384 multiplexillary sequencer Genome Res. 10 (11), 1757-1771 (2000)	20530913	11076861		
The RIKEN Genome Exploration Research Group Phase II Team and the PANTOM Consortium. Functional annotation of a full-length mouse cDNA collection Nature 409, 685-690 (2001)				
The RIKEN Genome Exploration Research Group Phase II Team. Analyses of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs Nature 420, 563-573 (2002)				
Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashitune, W., Hayashida, K., Hayatsu, N., Hiramoto, K., Hirooka, T., Hirozane, T., Horii, F., Imocani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T., Kato, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nakamura, M., Niishi, K., Nomura, K., Numasaki, R., Ohno, M., Okazaki, Y., Saico, R., Saichoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Saeki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y.				
Direct Submission Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group; RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail: genome-res@cc.riken.jp) URL: http://genome.gsc.riken.jp/, Tel: 81-45-503-9222, Fax: 81-45-503-9216)				
cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN Division of Experimental Animal Research in Riken contributed to prepare mouse tissues. Please visit our web site for further details. URL: http://genome.gsc.riken.jp/ URL: http://fantom.gsc.riken.jp/. Location/Qualifiers				
1. 3634				
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/clone="A530097B07"				
/sex="male"				
/tissue_type="aorta and vein"				
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DESTIMTAYVMAIICALFHPILPCIMVQRCRCLRHQNDPFDADISLK"

Alignment of: us-10-726-967a-1 x AK014285 ..

Alignment segment 1/1: (+)

	Quality:	77.00	Score:	3.27
Matching Length:	20	Total Length:	20	
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00	Total Percent Identity:	80.00	

Gaps: 0

Alignment:

```

22 ThGlnhiacGlytleargleupProleuAargSerGlyleuGlycAlaAaPr 38
||::|||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
513 ACCCATCTCGGCATCCGGCTGCGCCCTTCCGACGAGGGCTGCGAGGGCCACC 562
38 oleuGlyleu
|||:|||||
563 CCTGGGCGCTTG 572

Sequence name: rstrip2ndb:AK014464

Sequence documentation:
LOCUS AK014464 3859 bp mRNA linear HTC 03-APR-2004
DEFINITION Mus musculus 16 days embryo head cDNA, RIKEN full-length enriched
library, clone:412240LC04 product:beta-site APP cleaving enzyme,
full insert sequence.
ACCESSION AK014464
VERSION AK014464.1 GI:12852334
KEYWORDS HTC; CAP trapper.
SOURCE Mus musculus (house mouse)
ORGANISM Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sclurognathi; Muridae; Murinae; Mus.

REFERENCE
AUTHORS Carninci,P. and Hayashizaki,Y.
TITLE High-efficiency full-length cDNA cloning
JOURNAL Meth. Enzymol. 303, 19-44 (1999)
MEDLINE 99279253
PUBMED 10349666
REFERENCE
AUTHORS Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K.,
Itoh,M., Kono,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
TITLE Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new genes
JOURNAL Genome Res. 10 (10), 1617-1630 (2000)
MEDLINE 20493374
PUBMED 11042159
REFERENCE
AUTHORS 3
Shibata,K., Itoh,M., Mizawa,K., Nagao,S., Sasaki,N., Carninci,P.,
Kono,H., Akiyama,J., Nishi,K., Kiteunoki,T., Tashiro,H., Itoh,M.,
Sund,N., Ishii,S., Nakamura,S., Hazama,M., Nishino,T., Harada,A.,
Yamamoto,S.R., Matsunoto,H., Sakaguchi,S., Ikegami,T., Kashiwagi,K.,
Fujiike,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Matshiki,M.,
Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsumura,S., Kawai,J.,
Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y.
TITLE RIKEN integrated sequence analysis (RISA) system--364-format
sequencing pipeline with 384 multicapillary sequencer
JOURNAL Genome Res. 10 (11), 1757-1771 (2000)
MEDLINE 11076861
PUBMED 11076861
REFERENCE
AUTHORS 4
The RIKEN Genome Exploration Research Group Phase II Team and the
PANTOM Consortium.
TITLE Functional annotation of a full-length mouse cDNA collection
JOURNAL Nature 409, 685-690 (2001)
PUBMED 11076861
REFERENCE
AUTHORS 5
The PANTOM Consortium and the RIKEN Genome Exploration Research
Group Phase I & II Team.
TITLE Analysis of the mouse transcriptome based on functional annotation
of 60,770 full-length cDNAs

```



Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohnato, N., Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M., and Hayashizaki, Y.

TITLE  
JOURNAL

Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail: genome-res@gscc.riken.jp, URL: http://genome.gsc.riken.jp/, Tel: 81-45-503-9222, Fax: 81-45-503-9216)

## COMMENT

cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to prepare mouse tissues.

FEATURES  
SOURCE

URL: http://genome.gsc.riken.jp/  
URL: http://tanom.gsc.riken.jp/  
Location/Qualifiers  
1. 3877  
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/mol\_type="mRNA"  
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/sex="male"  
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AATTSKPFITNSNMEGILGLAYAEIARPDLSLPPFDSLVKQTHINIPISLQCA  
GFLPNTQELALASVGSMLIGIDHSLYARPDLSLPPFDSLVKQTHINIPISLQCA  
DCEYNDKSIIVSGTNLRLPKKFEAAVSIKAASTKFPDGFGLQVCMQAG  
TTPNPIIPVLSLYMGVNTOSFRITILPOOYLRPVADVATSDCKYKAVOSSTGT  
VMCAVIMEGFYVVDPRARKIGFVSAACHVDFRKAAGPPTADMEQCNIPOT  
DESTIMTATVMAIICLPMILPCLMVCQNRCLRHQHDPAIDISLK"

## CDS

Alignment of: us-10-726-967a-1 x AK03112 ..  
Alignment segment 1/1: (+)  
Quality: 77.00  
Matching length: 20  
Total length: 3.38  
Matching Percent Similarity: 90.00  
Matching Percent Identity: 80.00  
Total Percent Similarity: 90.00  
Total Percent Identity: 80.00  
Gaps: 0

## Alignment:

22 ThrGlnHsGlyYIleArgLeuProLeuAysGerglyLeuGlyYAlaBr 38  
|||||  
513 ACCCATCTCGGCATCGGCTGCCCTTCCAGACGGGCTGCGAGGGCACC 562  
38 olenuGlyLeu 41  
|||||  
563 CCTGGGCGCTTG 572

Sequence name: ret2p2ndb:AK082317

## Sequence documentation:

LOCUS AK082317 4048 bp mRNA linear HTC 03-APR-2004

DEFINITION Mus musculus 0 day neonate cerebellum cDNA, RIKEN full-length enriched library, clone: C230037E16 product: beta-site APP cleaving enzyme, full insert sequence.

ACCESSION AK082317  
VERSION AK082317.1 GI:26349644  
KEYWORDS HTC; CAP trapper.  
SOURCE Mus musculus (house mouse)  
ORGANISM Mus musculus

## REFERENCE

1 Carninci, P. and Hayashizaki, Y.  
High-efficiency full-length cDNA cloning  
Meth. Enzymol. 303, 19-44 (1999)  
99279253  
10349636

## REFERENCE

2 Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Komno, H., Okazaki, Y., Muramatsu, M., and Hayashizaki, Y.  
Normalization and subtractions of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes  
Genome Res. 10 (10), 1617-1630 (2000)  
20499374  
11042159

## REFERENCE

3 Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Komno, H., Akiyama, J., Nishi, K., Kitanai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishino, T., Harada, A., Yamamoto, R., Matsunoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujitake, S., Inoue, K., Togawa, Y., Izawa, M., Onata, E., Watabiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsumura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A., and Hayashizaki, Y.  
RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer  
Genome Res. 10 (11), 1757-1771 (2000)  
20530913  
11076861

## TITLE

JOURNAL PUBLISHED  
PUBMED 11076861

## REFERENCE

AUTHORS THE RIKEN Genome Exploration Research Group Phase II Team and the PANTOM Consortium.  
FUNCTIONAL annotation of a full-length mouse cDNA collection  
Nature 409, 685-690 (2001)

## TITLE

JOURNAL PUBLISHED  
PUBMED 11076861

AUTHORS THE PANTOM Consortium and the RIKEN Genome Exploration Research Group Phase I & II Team.  
Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs  
Nature 420, 563-573 (2002)  
6 (bases 1 to 4048)

## REFERENCE

AUTHORS Adachi, S., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirozane, T., Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T., Katoh, H., Kawai, J., Kojima, Y., Kondou, S., Komno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohnato, N., Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M., and Hayashizaki, Y.

## TITLE

JOURNAL PUBLISHED  
PUBMED 11076861

COMMENT Submitted (16-APR-2002) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail: genome-res@gscc.riken.jp, URL: http://genome.gsc.riken.jp/, Tel: 81-45-503-9222, Fax: 81-45-503-9216)  
cDNA library was prepared and sequenced in Mouse Genome



CDS

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AATIESDKPFLNGSMGILGLATAYAEIARPDLSLEPFDSLVKOTHPITPSLCCGA
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Alignment of: us-10-726-967a-1 x AK046175 ..

Alignment segment 1/1: (+)

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Length: 20				
Percent Similarity: 90.00				
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Matching <th>Percent Identity:</th> <th>80.00</th> <th>20</th> <th></th>	Percent Identity:	80.00	20	
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Gaps:		0		

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22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLys 38
||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
510 ACCCATCTCGGATCCGGCTTCCAGCGCGCTCGACAGGCGCCACC 559
38 GLeuGlyLeu
|||||
560 CCTGGGCGCTG
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569

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Sequence name: rsetp2ndb:AK082230

Sequence documentation:

LOCUS AK082230 3805 bp mRNA linear HTC 03-APR-2004  
 DEFINITION Mus musculus 0 day neonate cerebellum cDNA, RIKEN full-length  
 enriched library, clone:C230026008 product:beta-site APP cleaving  
 enzyme, full insert sequence.

ACCESSION AK082230  
 VERSION AK082230.1 GI:26100512  
 KEYWORDS HTC; CAP trapper.  
 SOURCE Mus musculus (house mouse)  
 ORGANISM Mus musculus

REFERENCE 1 Carninci, P. and Hayashizaki, Y.  
 AUTHOES Carninci, P., Itoh, M., Hayatsu, N., Sugahara, Y., Shibata, K.,  
 Itoh, M., Kono, H., Okazaki, Y., Muramatsu, M., and Hayashizaki, Y.  
 TITLE High-efficiency full-length cDNA cloning  
 JOURNAL Meth. Enzymol. 303, 19-44 (1999)  
 MEDLINE 99279253  
 PUBMED 10349636

REFERENCE 2 Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K.,  
 AUTHOES Carninci, P., Itoh, M., Hayatsu, N., Sugahara, Y., Shibata, K.,  
 Itoh, M., Kono, H., Okazaki, Y., Muramatsu, M., and Hayashizaki, Y.  
 TITLE Normalization and subtraction of cap-trapper-selected cDNAs to  
 JOURNAL prepare full-length cDNA libraries for rapid discovery of new genes  
 MEDLINE 20499374  
 PUBMED 11042159

REFERENCE 3 Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P.,  
 AUTHOES Kono, H., Akiyama, T., Nishi, K., Kitasuna, T., Tashiro, H., Itoh, M.,  
 Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A.,

Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kaehiwagi, K.,  
 Fujiwara, S., Inoue, K., Togawa, Y., Iwata, M., Ohara, E., Matshiki, M.,  
 Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuda, S., Kawai, U.,  
 Okazaki, Y., Muramatsu, M., Inoue, Y., Kita, A., and Hayashizaki, Y.  
 RIKEN integrated sequence analysis (RISA) system--384-format  
 sequencing pipeline with 384 multicapillary sequencer  
 Genome Res. 10 (11), 1757-1771 (2000)

JOURNAL  
 MEDLINE 20530913  
 PUBMED 11076861

REFERENCE

AUTHORS

TITLE

THE RIKEN Genome Exploration Research Group Phase II Team and the  
 FANTOM Consortium.  
 Functional annotation of a full-length mouse cDNA collection  
 Nature 409, 685-690 (2001)

5 The FANTOM Consortium and the RIKEN Genome Exploration Research  
 Group Phase I & II Team.  
 Analysis of the mouse transcriptome based on functional annotation  
 of 60,770 full-length cDNAs  
 Nature 420, 563-573 (2002)

REFERENCE

AUTHORS

6 (bases 1 to 3805)  
 Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P.,  
 Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, M.,  
 Hayashida, K., Hayatsu, N., Hiramoto, K., Hirooka, T., Hirozane, T.,  
 Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T.,  
 Kato, H., Kawat, J., Kojima, Y., Kondo, S., Kono, H., Kouda, M.,  
 Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M.,  
 Nakamura, M., Nishi, K., Nomura, K., Numasaki, R., Ohno, M., Ohnato, N.,  
 Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N.,  
 Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T.,  
 Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S.,  
 Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A.,  
 Muramatsu, M., and Hayashizaki, Y.

TITLE

JOURNAL

COMMENT

Submitted (16-APR-2002) Yoshihide Hayashizaki, The Institute of  
 Physical and Chemical Research (RIKEN), Laboratory for Genome  
 Exploration and Chemical Research (RIKEN), Laboratory for Genome  
 Exploration Research Group, RIKEN Genomic Sciences Center (GSC),  
 RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama,  
 Kanagawa 230-0045, Japan (E-mail: genome-res@gsc.riken.jp,  
 URL: http://genome.gsc.riken.jp/, Tel: 81-45-503-9222,  
 Fax: 81-45-503-9216)  
 cDNA library was prepared and sequenced in Mouse Genome  
 Encyclopedia Project of Genome Exploration Research Group in Riken  
 Division of Experimental Animal Research in Riken contributed to  
 prepare mouse tissues.  
 Please visit our web site for further details.  
 URL: http://genome.gsc.riken.jp/  
 URL: http://fantom.gsc.riken.jp/  
 Location/Qualifiers

FEATURES

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 putative"

Alignment of: us-10-726-967a-1 x AK082230 ..

Alignment segment 1/1: (+)

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Percent Similarity: 85.00				
Total Percent Similarity: 85.00				
Matching <th>Percent Identity:</th> <th>75.00</th> <th>20</th> <th></th>	Percent Identity:	75.00	20	
Total Percent Identity:				





## COMMENT

On May 8, 2003 this sequence version replaced gi:30434929.

Contact: Genoscope  
Genoscope - Centre National de Sequencage

2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE

Email: seqref@genoscope.cns.fr, web : www.genoscope.cns.fr  
1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime  
end enriched, double-strand cDNA was digested with Not I and cloned  
into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library  
was normalized. Library was constructed by life technologies, a  
division of Invitrogen. This sequence belongs to sequence cluster  
5902.T

For more information about this cluster, see  
<http://www.genoscope.cns.fr/cdnafs=CS0DD007D0H09QPI&c=5902.r>.

## FEATURES

## SOURCE

Location/Qualifiers

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/clone="CS0DD007YP18"

/issue\_type="NEUROBLASTOMA COT 50-NORMALIZED"

/note="1st strand cDNA was primed with a NotI-oligo(dT)

primer. Five prime end enriched, double-strand cDNA was  
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sites of the pCMVSPORT 6 vector. Library was normalized."

Alignment of: us-10-726-967a-1 x BX376891 ..

Alignment segment 1/1: (-)

Matching Percent	Similarity	Quality	Score
64.29	14	35.00	12.3

Total Percent	Similarity	Matching Percent	Identity
64.29	14	57.14	57.14

Gaps: 0

## Alignment:

25 GYIIEAAGLeuProleuArgSerGlyLeuGlyAlaPro 38

222 GGGATCCGGAGCCCTGACATCGCGCGCGCGCCACCT 181

Sequence name: refp2ndb:AK041285

## Sequence documentation:

LOCUS AK041285 3634 bp mRNA linear HTC 03-APR-2004

DEFINITION Mus musculus adult male aorta and vein cDNA, RIKEN full-length  
enriched library, clone:A530097B07 product:beta-site APP cleaving  
enzyme, full insert sequence.

ACCESSION AK041285

VERSION AK041285.1 GI:26334342

KEYWORDS HTC; CAP trapper.

SOURCE Mus musculus (house mouse)

## ORGANISM

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

## REFERENCE

1 Carninci, P. and Hayashizaki, Y.

High-efficiency full-length cDNA cloning

Meth. Enzymol. 303, 19-44 (1999)

JOURNAL MEDLINE

PUBMED 99279253

PUBMED 10349636

## REFERENCE

AUTHORS

TITLE

Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K.,  
Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y.

Normalization and subtraction of cap-trapper-selected cDNAs to  
prepare full-length cDNA libraries for rapid discovery of new genes

JOURNAL MEDLINE

PUBMED 20499374

PUBMED 11042155

## REFERENCE

AUTHORS

Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P.,  
Konno, H., Akiyama, J., Nishi, K., Kitanai, T., Tashiro, H., Itoh, M.,

Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A.,  
Yamamoto, R., Matsunoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K.,  
Fujiwake, S., Inoue, K., Togawa, Y., Iwata, M., Ohara, E., Matshiki, M.,  
Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuzaki, S., Kawai, J.,  
Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y.

RIKEN integrated sequence analysis (RISA) system--384-format  
sequencing pipeline with 384 multicapillary sequencer

Genome Res. 10 (11), 1757-1771 (2000)

JOURNAL MEDLINE

PUBMED 20530913

PUBMED 11076861

## REFERENCE

AUTHORS

TITLE

JOURNAL

REFERENCE

AUTHORS

TITLE

JOURNAL

REFERENCE

AUTHORS

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JOURNAL

REFERENCE

AUTHORS





SOURCE ORGANISM	Mus musculus (house mouse)
REFERENCE AUTHORS	Bukacynski, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE TITLE	1 Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Kono, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. High-efficiency full-length cDNA cloning
REFERENCE JOURNAL	2 Meth. Enzymol. 303, 19-44 (1999)
REFERENCE PUBLISHED	3 99279253
REFERENCE AUTHORS	4 10349656
TITLE	5 Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Kono, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes
JOURNAL	Genome Res. 10 (10), 1617-1630 (2000)
PUBLISHED	Genome Res. 10 (11), 1757-1771 (2000)
20499374	
11042159	
3	
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100	

strand cDNA was prepared with the primer adapter of sequence 15' GAGAGAGAGATTCCTCAGTTAATTAAATTAAATTCCTCCCCCCCCCCC 3'. cDNA was cleaved with BamHI and XhoI. cDNA of size comprised longer than 7 kb was selected before cloning. Vector: a modified plasmidscript KS(+) after bulk excision from Lambda FLC I...Cloning sites, 5' end: SalI; 3' end: BamHI. Host: DH10B.

**FEATURES**

**source**

location/qualifiers

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/clone\_id="RIKEN full-length enriched mouse cDNA library"

/dev\_stage="16 days embryo"

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/note="unnamed protein product; beta-site APP cleaving enzyme (MGI:1346542, GI:1011792, evidence: BLASTN, 98%, match=3874)

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**Alignment of: us-10-726-967a-1 x AK014464 ..**

**Alignment segment 1/1: (-)**

Matching Percent	Similarity	Quality	Score
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64.29	64.29	50.00	50.00

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191 CAGCGGGGGGAGATCGGGCCCTGTGTGGGCTGGAGGGGGCGG

36
150

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Sequence name: ref2pndb:AK033112

Sequence documentation:

LOCUS AK033112 3877 bp mRNA linear HTC 03-APR-2004

DEFINITION Mus musculus 15 days embryo male testis cDNA, RIKEN full-length enriched library, clone:8030431G04 product:beta-site APP cleaving enzym, full insert sequence.

ACCESSION AK033112

VERSION AK033112.1 GI:26328834

KEYWORDS HTC; CAP trapper.

SOURCE Mus musculus (house mouse)

ORGANISM Mus musculus

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Scturognathi; Muridae; Murinae; Mus.

REFERENCES

1 Carninci, P. and Hayashizaki, Y. High-efficiency full-length cDNA cloning Meth. Enzymol. 303, 19-44 (1999)

2 Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K.,

Itch,M., Komno,H., Okazaki,Y., Muramatsu,M. and Hayaishizaki,Y.  
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20499374  
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3  
REFERENCE  
AUTHORS  
Shibata,K., Itch,M., Aizawa,K., Nagaoaka,S., Sasaki,N., Carninci,P.,  
Komno,H., Akiyama,J., Nishi,K., Kitanai,T., Tashiro,H., Itch,M.,  
Sumi,N., Ishii,Y., Nakamura,S., Hazama,M., Nishine,T., Harada,A.,  
Yamamoto,R., Matsumoto,H., Sakaguchi,S., Ikegami,T., Kashiwagi,K.,  
Fujiwara,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Watanabe,M.,  
Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuyama,S., Kawai,J.,  
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Genome Res. 10 (11), 1757-1771 (2000)  
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MEDLINE  
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PUBMED  
11076861  
4  
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AUTHORS  
The RIKEN Genome Exploration Research Group Phase II Team and the  
FANTOM Consortium.  
Functional annotation of a full-length mouse cDNA collection  
Nature 409, 685-690 (2001)  
JOURNAL  
REFERENCE  
5  
AUTHORS  
The FANTOM Consortium and the RIKEN Genome Exploration Research  
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of 60,770 full-length cDNAs  
Nature 420, 563-573 (2002)  
JOURNAL  
REFERENCE  
6 (bases 1 to 3877)  
AUTHORS  
Adachi,J., Aizawa,K., Akimura,T., Arikawa,T., Bono,H., Carninci,P.,  
Fukuda,S., Furuno,M., Hanagaki,T., Hara,A., Hashizume,M.,  
Hayaishida,K., Hayatsu,N., Hiramoto,K., Hirooka,T., Hirozane,T.,  
Hori,F., Imocani,K., Ishii,Y., Itch,M., Kagawa,I., Kasukawa,T.,  
Kato,H., Kawai,J., Kojima,Y., Kondo,S., Komno,H., Kouda,M.,  
Koyama,S., Kurihara,C., Matsuyama,T., Miyazaki,A., Murata,M.,  
Nakamura,M., Nishi,K., Nomura,K., Numasaki,R., Ohno,M., Ohsato,N.,  
Okazaki,Y., Salto,R., Saitoh,H., Sakai,C., Sakai,K., Sakazume,N.,  
Sano,H., Sasaki,D., Shibata,K., Shinagawa,A., Shiraki,T.,  
Sogabe,Y., Tagami,M., Tagawa,A., Tanigawa,A., Takahashi,F., Takaku-Akahira,S.,  
Takeda,Y., Tanaka,T., Tomaru,Y., Toya,T., Yasunishi,A.,  
Muramatsu,M. and Hayaishizaki,Y.  
Direct Submission  
Submitted (16-JUL-2001) Yoshihide Hayaishizaki, The Institute of  
Physical and Chemical Research (RIKEN), Laboratory for Genome  
Exploration Research Group, RIKEN Genomic Sciences Center (GSC),  
RIKEN Yokohama Institute, 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama,  
Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.jp,  
URL: http://genome.gsc.riken.jp/, Tel:81-45-503-9222,  
Fax:81-45-503-9216)  
COMMENT  
cDNA library was prepared and sequenced in Mouse Genome  
Encyclopedia Project of Genome Exploration Research Group in Riken  
Genomic Sciences Center and Genome Science Laboratory in RIKEN.  
Division of Experimental Animal Research in Riken contributed to  
prepare mouse tissues.  
Please visit our web site for further details.  
URL: http://genome.gsc.riken.jp/  
URL: http://fantom.gsc.riken.jp/.  
Location/Qualifiers  
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Total Percent Identity: 50.00  
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Matching Percent Identity: 50.00  
Total Percent Identity: 50.00

Alignment:  
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Sequence name: rtp2ndb:AK080498  
Sequence documentation:  
LOCUS AK080498 3880 bp mRNA linear HTC 03-APR-2004  
DEFINITION Mus musculus 7 days neonate cerebellum cDNA, RIKEN full-length  
enriched library, clone:A730059K08 product:beta-site APP cleaving  
enzyme, full insert sequence.  
ACCESSION AK080498  
VERSION AK080498.1 GI:26099278  
KEYWORDS HTC; Cap trapper.  
SOURCE Mus musculus (house mouse)  
ORGANISM Mus musculus  
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.  
REFERENCE  
AUTHORS Carninci,P. and Hayaishizaki,Y.  
1 High-efficiency full-length cDNA cloning  
Meth. Enzymol. 303, 19-44 (1999)  
JOURNAL  
MEDLINE  
PUBMED  
99279253  
10349636  
2  
REFERENCE  
AUTHORS Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K.,  
Itch,M., Komno,H., Okazaki,Y., Muramatsu,M. and Hayaishizaki,Y.  
Normalization and subtraction of cap-trapper-selected cDNAs to  
prepare full-length cDNA libraries for rapid discovery of new genes  
Genome Res. 10 (10), 1617-1630 (2000)  
JOURNAL  
MEDLINE  
PUBMED  
20499374  
11042159  
3  
REFERENCE  
AUTHORS Shibata,K., Itch,M., Aizawa,K., Nagaoaka,S., Sasaki,N., Carninci,P.,  
Komno,H., Akiyama,J., Nishi,K., Kitanai,T., Tashiro,H., Itch,M.,  
Sumi,N., Ishii,Y., Nakamura,S., Hazama,M., Nishine,T., Harada,A.,  
Yamamoto,R., Matsumoto,H., Sakaguchi,S., Ikegami,T., Kashiwagi,K.,  
Fujiwara,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Watanabe,M.,  
Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuyama,S., Kawai,J.,  
Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayaishizaki,Y.  
RIKEN integrated sequence analysis (RISA) system--384-format  
sequencing pipeline with 384 multicapillary sequencer  
Genome Res. 10 (11), 1757-1771 (2000)  
JOURNAL  
MEDLINE  
PUBMED  
20530913  
11076861

```

REFERENCE
AUTHORS      The RIKEN Genome Exploration Research Group Phase II Team and the PANTOM Consortium.
TITLE        Functional annotation of a full-length mouse cDNA collection
JOURNAL      Nature 409, 685-690 (2001)
AUTHORS      5
TITLE        The PANTOM Consortium and the RIKEN Genome Exploration Research Group Phase I & II Team.
JOURNAL      Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
AUTHORS      Nature 420, 563-573 (2002)
ADACHI,J., Aizawa,K., Akimura,T., Arakawa,T., Bono,H., Carninci,P., Fukuda,S., Furuno,M., Hanegaki,T., Hara,A., Hashizume,W., Hayashida,K., Hayatsu,N., Hizemoto,K., Hirooka,T., Hirozane,T., Horii,F., Imocani,K., Ishii,Y., Itoh,M., Kageawa,T., Katoch,H., Kawai,J., Kojima,Y., Kondo,S., Konno,H., Kouda,M., Koya,S., Kurihara,C., Matsuyama,T., Miyazaki,A., Murata,M., Nakamura,Y., Niemi,R., Nomura,K., Nunazaki,R., Ohno,M., Ohsato,N., Okazaki,Y., Saito,R., Saitoh,K., Sakai,C., Sakai,R., Sakazume,N., Sano,H., Sasaki,D., Shibata,K., Shinagawa,A., Shiraki,T., Sogabe,Y., Tagami,M., Tagawa,A., Takaishi,F., Takaku-Akahira,S., Takeda,Y., Tanaka,T., Tomaru,A., Toya,T., Yasunishi,A., Muramatsu,M. and Hayashizaki,T.
TITLE        Direct Submission
JOURNAL      Submitted (15-APR-2002) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute, 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@cc.riken.jp, URL:http://genome.gsc.riken.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
COMMENT      cDNA library was prepared and sequenced in Mouse Genome Encyclopaedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN Division of Experimental Animal Research in Riken contributed to prepare mouse tissues.
FEATURES
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Alignment segment 1/1: (-)
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Total Length: 14
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ACCESSION	AK082317			
VERSION	AK082317.1	GI:26349644		
KEYWORDS	HTC, CAP trapper.			
SOURCE	Mus musculus (house mouse)			
ORGANISM	Mus musculus			
REFERENCE	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.			
AUTHORS				
TITLE	1 Carninci, P. and Hayashizaki, Y			
JOURNAL	High-efficiency full-length cDNA cloning			
MEDLINE	Meth. Enzymol. 303, 19-44 (1999)			
PUBMED	99279253			
REFERENCE	10349636			
AUTHORS	2			
TITLE	Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K.,			
JOURNAL	Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y.			
MEDLINE	Normalization and subtraction of cap-trapper-selected cDNAs to			
PUBMED	prepare full-length cDNA libraries for rapid discovery of new genes			
REFERENCE	Genome Res. 10 (10), 1617-1630 (2000)			
AUTHORS	3			
TITLE	Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P.,			
JOURNAL	Konno, H., Akiyama, D., Nishi, K., Kitanai, T., Tashiro, H., Itoh, M.,			
MEDLINE	Sun, N., Ishii, Y., Nakamura, S., Hazama, M., Nishino, T., Harada, A.,			
PUBMED	Yanamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kaichi, K.,			
REFERENCE	Fujiwaka, S., Inoue, K., Togawa, Y., Itawa, M., Ohara, E., Watahiki, M.,			
AUTHORS	Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsura, S., Kawai, J.,			
JOURNAL	Okazaki, Y., Muramatsu, M., Inoue, Y., Kita, A. and Hayashizaki, Y.			
MEDLINE	RIKEN integrated sequence analysis (RIS) system-384-format			
PUBMED	sequencing pipeline with 384 multichannel sequencer			
REFERENCE	Genome Res. 10 (11), 1757-1771 (2000)			
AUTHORS	4			
TITLE	The RIKEN Genome Exploration Research Group Phase II Team and the			
JOURNAL	PANTOM Consortium.			
MEDLINE	Functional annotation of a full-length mouse cDNA collection			
PUBMED	Nature 409, 685-690 (2001)			
REFERENCE	5			
AUTHORS	The PANTOM Consortium and the RIKEN Genome Exploration Research			
JOURNAL	Group Phase I & II Team.			
MEDLINE	Analysis of the mouse transcriptome based on functional annotation			
PUBMED	of 60,770 full-length cDNAs			
REFERENCE	Nature 420, 563-573 (2002)			
AUTHORS	6 (bases 1 to 4048)			
JOURNAL	Adachi, S., Aizawa, K., Akimura, T., Arikawa, T., Bono, H., Carninci, P.,			
MEDLINE	Fukuda, S., Furuta, M., Hanagaki, T., Hara, A., Hashizume, W.,			
PUBMED	Hori, F., Hayatsu, N., Hiramoto, K., Hirooka, T., Hirozane, T.,			
REFERENCE	Koyama, T., Imokawa, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T.,			
AUTHORS	Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M.,			
JOURNAL	Koyama, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M.,			
MEDLINE	Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohtsuo, N.,			
PUBMED	Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N.,			
REFERENCE	Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shitaka, T.,			
AUTHORS	Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S.,			
JOURNAL	Takeda, Y., Tanaka, T., Tomaru, A., Toyata, T., Yasunishi, A.,			
MEDLINE	Muramatsu, M. and Hayashizaki, Y.			
PUBMED	Direct Submission			
REFERENCE	Submitted (16-APR-2002) Yoshihide Hayashizaki, The Institute of			
AUTHORS	Physical and Chemical Research (RIKEN), Laboratory for Genome			
JOURNAL	Exploration Research Group, RIKEN Genomic Sciences Center (GSC),			
MEDLINE	RIKEN Yokohama Institute, 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama,			
PUBMED	Kanagawa 230-0045, Japan (E-mail:genome-research@riken.jp,			
REFERENCE	URL: http://genome.gsc.riken.jp/, Tel:81-45-503-9222,			
AUTHORS	Fax:81-45-503-9216)			
JOURNAL	cDNA library was prepared and sequenced in Mouse Genome			
MEDLINE				
PUBMED				
REFERENCE				
AUTHORS				
TITLE				
JOURNAL				
MEDLINE				
PUBMED				
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MEDLINE				
PUBMED				
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TITLE				
JOURNAL				
MEDLINE				
PUBMED				
REFERENCE				

Encyclopedia Project of Genome Exploration Research Group in Riken  
Genomic Sciences Center and Genome Science Laboratory in RIKEN,  
Division of Experimental Animal Research in Riken contributed to  
prepare mouse tissues.

Please visit our web site for further details.  
URL: <http://genome.gsc.riken.jp/>  
URL: <http://fantom.gsc.riken.jp/>.

## FEATURES

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## CDS

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Total Percent Similarity: 64.29 Total Percent Identity: 50.00
Gaps: 0
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211 CAGCGGGGGGATCGGGCCCTTGTCGGGGCTGGAGGGCGCGG 170
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Sequence documentation:

LOCUS AK046175 4101 bp mRNA linear HTC 03-APR-2004

DEFINITION Mus musculus adult male corpora quadrigemina cDNA, RIKEN  
full-length enriched library, clone:B230346M13 product:beta-site

APP cleaving enzyme, full insert sequence.

ACCESSION AK046175 GI:26337868

VERSION AK046175.1

KEYWORDS HTC; CAP trapper.

SOURCE Mus musculus (house mouse)

ORGANISM Mus musculus

REFERENCE 1 Carninci, P. and Hayashizaki, Y.

AUTHORS High-efficiency full-length cDNA cloning  
JOURNAL Meth. Enzymol. 303, 19-44 (1999)  
MEDLINE 99279253  
PUBMED 10349636  
REFERENCE 2

## AUTHORS

Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K.,  
Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y.  
Normalization and subtraction of cap-trapper-selected cDNAs to  
prepare full-length cDNA libraries for rapid discovery of new genes  
Genome Res. 10 (10), 1617-1630 (2000)

## JOURNAL

MEDLINE 20499374  
PUBMED 11042159

## REFERENCE

## AUTHORS

## TITLE

Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P.,  
Konno, H., Akiyama, J., Nishi, K., Katsunari, T., Tashiro, H., Itoh, M.,  
Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishino, T., Harada, A.,  
Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K.,  
Fujiwara, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watabiki, M.,  
Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsura, S., Kawai, J.,  
Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y.  
RIKEN integrated sequence analysis (RISA) system -384-format  
sequencing pipeline with 384 multichannel sequencer  
Genome Res. 10 (11), 1757-1771 (2000)

## JOURNAL

20530913  
11076861

## PUBMED

11076861

## REFERENCE

## AUTHORS

## TITLE

The RIKEN Genome Exploration Research Group Phase II Team and the  
FANTOM Consortium.  
Functional annotation of a full-length mouse cDNA collection  
Nature 409, 685-690 (2001)

## JOURNAL

11076861

## REFERENCE

## AUTHORS

## TITLE

The FANTOM Consortium and the RIKEN Genome Exploration Research  
Group Phase I & II Team.  
Analysis of the mouse transcriptome based on functional annotation  
of 60,770 full-length cDNAs  
Nature 420, 563-573 (2002)

## JOURNAL

6 (bases 1 to 4101)

## REFERENCE

## AUTHORS

Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P.,  
Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W.,  
Hayashida, K., Hayatsu, N., Hiramoto, K., Hirooka, T., Hirozane, T.,  
Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T.,  
Kato, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M.,  
Koya, S., Kuribara, C., Matsuyama, T., Miyazaki, A., Murata, M.,  
Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, K., Ohsato, N.,  
Okazaki, Y., Saito, K., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N.,  
Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T.,  
Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S.,  
Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A.,  
Muramatsu, M. and Hayashizaki, Y.  
Direct Submission

## JOURNAL

Submitted (16-JUL-2001)

## COMMENT

Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of  
Physical and Chemical Research (RIKEN), Laboratory for Genome  
Exploration Research Group, RIKEN Genomic Sciences Center (GSC),  
RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama,  
Kanagawa 230-0045, Japan (E-mail: genome-res@gsc.riken.jp,  
URL: <http://genome.gsc.riken.jp/>, Tel: 81-45-503-9222,  
Fax: 81-45-503-9216)

## JOURNAL

CDNA library was prepared and sequenced in Mouse Genome  
Encyclopedia Project of Genome Exploration Research Group in Riken  
Genomic Sciences Center and Genome Science Laboratory in Riken.  
Division of Experimental Animal Research in Riken contributed to  
prepare mouse tissues.

## JOURNAL

Please visit our web site for further details.  
URL: <http://genome.gsc.riken.jp/>  
URL: <http://fantom.gsc.riken.jp/>.

## JOURNAL

Location/Qualifiers

## FEATURES

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Matching Percent Similarity:	64.29	Matching Percent Identity:	50.00
Total Percent Similarity:	64.29	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

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Sequence name: rsetp2ndb:AY417360

Sequence documentation:

LOCUS AY417360 1506 bp DNA linear GSS 17-DEC-2003

DEFINITION Homo sapiens BACE gene, VIRUAL TRANSCRIPT, partial sequence,

genomic survey sequence.

ACCESSION AY417360

VERSION AY417360.1 GI:39773320

KEYWORDS GSS.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Euteheria; Primates; Carnivora; Homnidae; Homo.

REFERENCE 1 (bases 1 to 1506)

Clark,A.G., Glanowski,S., Nielson,R., Thomas,P., Kejarival,A.,

Todd,M.A., Tanenbaum,D.M., Civejlo,D.R., Lu,F., Murphy,B.,

Peritiera,S., Wang,G., Zheng,X.H., White,T.J., Sninsky,J.J.,

Adams,M.D. and Cargill,M.

Interfering nonneutral evolution from human-chimp-mouse orthologous

gene trials

Science 302 (5652), 1960-1963 (2003)

JOURNAL PUBMED 14671302

REFERENCE 2 (bases 1 to 1506)

Clark,A.G., Glanowski,S., Nielson,R., Thomas,P., Kejarival,A.,

Todd,M.A., Tanenbaum,D.M., Civejlo,D.R., Lu,F., Murphy,B.,

Peritiera,S., Wang,G., Zheng,X.H., White,T.J., Sninsky,J.J.,

Adams,M.D. and Cargill,M.

Alignment of: us-10-726-967a-1 x AY417360 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	15.2
Matching length:	11	Total length:	11
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Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
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Sequence name: rsetp2ndb:BY103030

Sequence documentation:

LOCUS BY103030 346 bp mRNA linear EST 07-DEC-2002

DEFINITION BY103030 RIKEN full-length enriched, pooled tissues, adult spleen,

etc. Mus musculus cDNA clone K630148P20 5', mRNA sequence.

ACCESSION BY103030

VERSION BY103030.1 GI:26213647

KEYWORDS EST.

SOURCE Mus musculus (house mouse)

ORGANISM Mus musculus

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Euteheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

REFERENCE 1 (bases 1 to 346)

Okazaki,Y., Furuno,M., Kaenkawa,T., Adachi,J., Bono,H., Kondo,S.,

Nikaido,I., Ohtsuka,N., Saito,R., Suzuki,H., Yamataka,I.,

Kiyosawa,H., Yagi,K., Tomaru,Y., Hasegawa,Y., Nogami,A.,

Schombach,C., Gojobori,T., Baldarelli,R., Hill,D.P., Butt,C.,

Hume,D.A., Quackenbush,J., Schriml,L.M., Kanapin,A., Matsuda,H.,

Batalov,S., Beisel,K.W., Blake,J.A., Brad,D., Brusic,V.,

Ciochia,C., Corbani,L.E., Cousins,S., Dalla,E., Dragani,T.A.,

Fletcher,C.F., Forrest,A., Frazer,K.S., Gaasterland,T.,

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Kawaji,H., Kawasawa,Y., Kedzierski,R.M., King,B.L., Konagaya,A.,

Kurochkin,I.V., Lee,Y., Lenhard,B., Lyons,P.A., Maglott,D.R.,

Maltais,L., Marchionni,L., McKenzie,L., Miki,H., Nagashima,T.,

Numata,K., Okido,T., Pavan,W.J., Pettes,G., Pesole,G.,

Petrovsky,N., Pillai,R., Pontius,J.V., Qi,D., Ramchandran,S.,

Ravasi,T., Reed,J.C., Reed,D.J., Reid,J., Ring,B.Z., Ringwald,M.,

Sandelin,A., Schneider,C., Sempile,C.A., Setou,M., Shimada,K.,

Siltana,R., Takenaka,Y., Taylor,M.S., Teasdale,R.D., Tomita,M.,

Verardo,R., Wagner,L., Wahlstedt,C., Wang,Y., Watanabe,Y.,

Wells,C., Wilming,L.G., Wyshaw-Borja,A., Yanagisawa,M., Yang,I.,

Yang,L., Yuan,Z., Zavolan,M., Zhu,Y., Zimmer,A., Carlini,P.,

Sakazume,N., Sato,K., Shiraki,T., Waki,K., Kawai,J., Aizawa,K.,

Arakawa,T., Fukuda,S., Hara,A., Hashizume,W., Imotani,K., Ishii,Y.,

Itoch,M., Kagawa,I., Miyazaki,A., Sakai,K., Sasaki,D., Shibata,K.,

Shinagawa,A., Yasunishi,A., Yoshino,M., Watanabe,R., Lande,E.S.,

Rogers,J., Birney,E. and Hayashizaki,Y.

Analysis of the mouse transcriptome based on functional annotation

of 60,770 full-length cDNAs

Nature 420, 563-573 (2002)

JOURNAL PUBMED 22354683

COMMENT 12466851

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Email: genome-resgsc.riken.jp, URL:http://genome.gsc.riken.jp/

Aizawa,K., Akimura,T., Arakawa,T., Carlini,P., Fukuda,S.,

Hirozane,T., Imotani,K., Ishii,Y., Itoch,M., Kawai,J., Konno,H.,



Miyazaki, A., Murata, M., Nakamura, M., Nomura, K., Numazaki, R., Ohno, M., Sakai, K., Sakazume, N., Sasaki, D., Sato, K., Shibata, K., Shiraki, T., Tagami, M., Waki, K., Wataniki, A., Muramatsu, M., and Hayashizaki, Y. Direct Submission  
Computational Analysis of Full-Length Mouse cDNAs Compared with Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)  
Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)  
RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)  
Computer-based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001)  
cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in Riken. Division of Experimental Animal Research in Riken contributed to prepare mouse tissues.  
Please visit our web site (<http://genome.gsc.riken.go.jp>) for further details.

## FEATURES

## SOURCE

Location/Qualifiers

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Alignment of: us-10-726-967a-1 x BY103030 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	9.89
Matching length:	7	Total length:	7
Matching Percent Similarity:	85.71	Matching Percent Identity:	71.43
Total Percent Similarity:	85.71	Total Percent Identity:	71.43
Gaps:	0		

Alignment:

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31 ArgSerGlyLeuGlyGlyAla      37
||| ||| ||| ||| ||| ||| |||
7 CGACGACGAATCGAGAGAGCC      27
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Sequence name: rctp2ndb:BY080676

Sequence documentation:

LOCUS BY080676 365 bp mRNA linear EST 07-DEC-2002  
DEFINITION BY080676 RIKEN full-length enriched, 16 days embryo whole body Mus musculus cDNA clone K630026J04 5', mRNA sequence.  
ACCESSION BY080676  
VERSION BY080676.1 GI:26191219

KEYWORDS EST.

## SOURCE

## ORGANISM

Mus musculus (house mouse)

Mus musculus  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.  
1 (bases 1 to 365)

REFERENCE  
AUTHORS

Okazaki, Y., Furuno, M., Kasukawa, T., Adachi, J., Bono, H., Kondo, S., Nakai, I., Ose, N., Saito, R., Suzuki, H., Yamakata, I., Kiyosawa, H., Yagi, K., Tomaru, Y., Hasegawa, Y., Nogami, A., Schombach, C., Gojodori, T., Balderelli, R., Hill, D.P., Bull, C., Hume, D.A., Quackenbush, J., Schriml, L.M., Kanapin, A., Matsuda, H., Batalov, S., Betzel, K.W., Blake, J.A., Brad, D., Brusic, V., Clothia, C., Corbani, L.E., Cousins, S., Dalla, E., Dargatz, T.A., Fletcher, C.P., Forrest, A., Frazer, K.S., Gaasterland, T., Gariboldi, M., Gissi, C., Godzik, A., Gough, J., Grimmond, S., Gustincich, S., Hirokawa, N., Jackson, I.J., Jarvis, E.D., Kanai, A., Kawaji, H., Kawasawa, Y., Keddes, R.M., King, B.L., Konagaya, A., Kurochkin, I.V., Lee, Y., Lenhard, B., Lyons, P.A., Maglott, D.R., Maltais, L., Marchionni, L., McKenzie, C., Wang, Y., Watanabe, Y., Numa, K., Okido, T., Pavan, W.J., Petosa, G., Pesole, G., Petrovsky, N., Pillai, R., Pontius, J.U., Qi, D., Ramchandran, S., Ravasi, T., Reed, J.C., Reed, D.J., Reid, J., Ring, B.Z., Ringwald, M., Sandelin, A., Schneider, C., Sempke, C.A., Setou, M., Shimada, K., Sultana, R., Takenaka, Y., Taylor, M.S., Teasdale, R.D., Tomita, M., Verardo, R., Wagner, L., Wahlestedt, C., Wang, Y., Watanabe, Y., Wells, C., Wilming, L.G., Wymshaw-Boris, A., Yanagisawa, M., Yang, I., Yang, L., Yuan, Z., Zavolan, M., Zhu, Y., Zimmer, A., Carninci, P., Hayashizaki, Y., Hirozane-Kishikawa, T., Kono, H., Nakamura, M., Sakazume, N., Sato, K., Shiraki, T., Waki, K., Kawai, J., Aizawa, K., Arakawa, T., Fukuda, S., Hara, A., Hashizume, W., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Miyazaki, A., Sakai, K., Sasaki, D., Shibata, K., Shingawa, A., Yasunishi, A., Yoshino, M., Waterston, R., Lander, E.S., Rogers, J., Birney, E. and Hayashizaki, Y.  
Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs  
Nature 420, 563-573 (2002)

## TITLE

## JOURNAL

## MEDLINE

## PUBMED

## COMMENT

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Fax: 81-45-503-9216  
Email: genome-research.riken.jp URL: <http://genome.gsc.riken.jp/>  
Aizawa, K., Akimura, T., Arakawa, T., Carninci, P., Fukuda, S., Hirozane, T., Imotani, K., Ishii, Y., Itoh, M., Kawai, J., Kono, H., Miyazaki, A., Murata, M., Nakamura, M., Nomura, K., Numazaki, R., Ohno, M., Sakai, K., Sakazume, N., Sasaki, D., Sato, K., Shibata, K., Shiraki, T., Tagami, M., Waki, K., Wataniki, A., Muramatsu, M. and Hayashizaki, Y. Direct Submission  
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Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)  
RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)  
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cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in Riken. Division of Experimental Animal Research in Riken contributed to prepare mouse tissues.  
Please visit our web site (<http://genome.gsc.riken.go.jp>) for further details.

## FEATURES

## SOURCE

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Alignment of: us-10-726-967a-1 x BY080676 ..

Alignment segment 1/1: (+)

Matching Percent	Similarity	Quality	Score
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85.71	85.71	71.43	71.43

Alignment:

31 ArgSerg1yLeng1yGlyAla  
 7 CGACGAGGATCGAGGAGCC

Sequence name: rsep2ndb:BY103030

Sequence document:

LOCUS BY103030 346 bp mRNA linear EST 07-DEC-2002  
 DEFINITION BY103030 RIKEN full-length enriched, pooled tissues, adult spleen,  
 etc. Mus musculus cDNA clone K630148P20 5', mRNA sequence.

ACCESSION BY103030  
 VERSION BY103030.1 GI:26213647  
 KEYWORDS EST.

SOURCE Mus musculus (house mouse)  
 ORGANISM Mus musculus

REFERENCE 1 (bases 1 to 346)  
 Atchuta, Y., Purano, M., Kanakawa, T., Adachi, J., Bono, H., Kondo, S.,  
 Nikaido, T., Oshino, N., Saito, R., Suzuki, H., Yamana, T.,  
 Kiyosawa, H., Yagi, K., Tomaru, Y., Hasegawa, Y., Nogami, A.,  
 Schombach, C., Gojohori, T., Baldarelli, R., Hill, D. P., Bult, C.,  
 Hume, D. A., Quackenbush, J., Schriml, L. M., Kanapin, A., Matsuda, H.,  
 Batilov, S., Beisel, K. W., Blake, J. A., Bradt, D., Brusic, V.,  
 Choitha, C., Corbani, L. E., Cousins, S., Della, E., Dragani, T. A.,  
 Fletcher, C. F., Forrest, A., Frazer, K. S., Gaasterland, T.,  
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 Gustincich, S., Hirokawa, N., Jackson, I. J., Jarvis, E. D., Kanai, A.,  
 Kawai, H., Kawasawa, Y., Kedzierski, R. M., King, B. L., Konagaya, A.,  
 Kurochkin, I. V., Lee, Y., Lenhard, B., Lyons, P. A., Maglott, D. R.,  
 Matsuda, L., Marchionni, L., McKenzie, L., Miki, H., Nagashima, T.,  
 Numa, K., Okido, T., Pavan, W. J., Pette, G., Pesole, G.,  
 Petrovsky, N., Pillai, R., Pontius, J. U., Qi, D., Ramachandran, S.,  
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 Sandelin, A., Schneider, C., Sempile, C. A., Setou, M., Shimada, K.,  
 Sultana, R., Takenaka, Y., Taylor, M. S., Teasdale, R. D., Tomita, M.,  
 Veratou, R., Wagner, J., Wanless, C., Wang, Y., Watanabe, Y.,  
 Wells, C., Wilming, L. G., Wynshaw-Boris, A., Yanagisawa, M., Yang, I.,  
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 Shinagawa, A., Yasunishi, A., Yoshino, M., Waterston, R., Lander, E. S.,  
 Rogers, J., Birney, E. and Hayashizaki, Y.

Analysis of the mouse transcriptome based on functional annotation  
 of 60,770 full-length cDNAs  
 Nature 420, 563-573 (2002)

JOURNAL MEDLINE PUBLISHED COMMENT  
 Laboratory for Genome Exploration Research Group, RIKEN Genomic  
 Sciences Center (GSC), Yokohama Institute

The Institute of Physical and Chemical Research (RIKEN)  
 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan  
 Tel: 81-45-503-9222  
 Fax: 81-45-503-9216  
 Email: genome-res@gsic.riken.jp, URL: http://genome.gsc.riken.jp/  
 Aizawa, K., Akimura, T., Arakawa, T., Carninci, P., Fukuda, S.,  
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 Shiraki, T., Tagami, M., Waki, K., Watanabe, A., Muramatsu, M. and  
 Hayashizaki, Y. Direct Submission  
 Computational Analysis of Full-length Mouse cDNAs Compared with  
 Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)  
 Normalization and subtraction of cap-trapper-selected cDNAs to  
 prepare full-length cDNA libraries for rapid discovery of new  
 genes. Genome Res. 10 (10), 1617-1630 (2000)  
 RIKEN integrated sequence analysis (RISA) system--384-format  
 sequencing pipeline with 384 multicapillary sequencer. Genome Res.  
 10 (11), 1757-1771 (2000)  
 Computer-based methods for the mouse full-length cDNA  
 encyclopedia: real-time sequence clustering for construction of a  
 nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001)  
 cDNA library was prepared and sequenced in Mouse Genome  
 Encyclopedia Project of Genome Exploration Research Group in Riken  
 Genomic Sciences Center and Genome Science Laboratory in Riken.  
 Division of Experimental Animal Research in Riken contributed to  
 prepare mouse tissues.  
 Please visit our web site (http://genome.gsc.riken.go.jp) for  
 further details.

#### FEATURES

Source

Location/Qualifiers  
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 /organism="Mus musculus"  
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Alignment of: us-10-726-967a-1 x BY103030 ..

Alignment segment 1/1: (-)

Matching Percent	Similarity	Quality	Score
87.50	87.50	27.00	10.3
87.50	87.50	8	8
87.50	87.50	62.50	62.50
87.50	87.50	62.50	62.50

Alignment:

31 ArgSerg1yLeng1yGlyAlaPro  
 192 AGGAAAGGCTGTGGGCGACCCCC

Sequence name: rsep2ndb:BY080676

Sequence documentation: 365 bp mRNA linear EST 07-DEC-2002

LOCUS BY080676 365 bp mRNA linear EST 07-DEC-2002

DEFINITION BY080676 RIKEN full-length enriched, 16 days embryo whole body Mus musculus cDNA clone K630026J04.5', mRNA sequence.

ACCESSION BY080676

VERSION BY080676.1 GI:26191219

KEYWORDS EST.

SOURCE Mus musculus (house mouse)

ORGANISM Mus musculus

REFERENCE Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 365)

AUTHORS Okazaki, Y., Furuno, M., Kanukawa, T., Adachi, J., Bono, H., Kondo, S., Nishida, I., Otsu, N., Saito, R., Suzuki, H., Yamana, I., Kiyosawa, H., Yagi, K., Tomaru, Y., Hasegawa, Y., Nogami, A., Schombach, C., Gajobori, T., Baldarelli, R., Hill, D. P., Bult, C., Hume, D. A., Quackenbush, J., Schriml, L. M., Kanapin, A., Matsuda, H., Batilov, S., Beisel, K. W., Blake, J. A., Brad, D., Bruscia, V., Chochia, C., Corbani, L. E., Cousins, S., Dalla, E., Dragani, T. A., Fletcher, C. F., Forrest, A., Frazer, K. S., Gaasterland, T., Gariboldi, M., Gissi, C., Godzik, A., Gough, J., Grimmond, S., Gustincich, S., Hirokawa, N., Jackson, I. J., Jarvis, E. D., Kanai, A., Kawaji, H., Kawasawa, Y., Kedzierski, R. M., King, B. L., Komagaya, A., Kurochkin, I. V., Lee, Y., Lenhard, B., Lyons, P. A., Maglott, D. R., Maltais, L., Marchionni, L., McKenzie, L., Miki, H., Nagashima, T., Numata, K., Okido, T., Pavan, W. J., Pertea, G., Pesole, G., Petrovsky, N., Pillai, R., Pontius, J. U., Qi, D., Ramchandran, S., Raveai, T., Reed, J. C., Reed, D. J., Reid, J., Ring, B. Z., Ringwald, M., Sanderlin, A., Schneider, C., Semple, C. A., Setou, M., Shimada, K., Sultana, R., Takenaka, Y., Taylor, M. S., Teasdale, R. D., Tomita, M., Verardo, R., Wagner, L., Wahlestedt, C., Wang, Y., Watanabe, Y., Wells, C., Wilming, L. G., Wymshaw-Boris, A., Yanagisawa, M., Yang, I., Yang, L., Yuan, Z., Zavolan, M., Zhu, Y., Zimmer, A., Carninci, P., Hayatsu, N., Hirozane-Kishikawa, T., Komori, H., Nakamura, M., Sakazume, N., Sato, K., Shiraki, T., Waki, K., Kawai, J., Alzawa, K., Arakawa, T., Fukuda, S., Hara, A., Hashizume, W., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Miyazaki, A., Sakai, K., Sasaki, D., Shibata, K., Shingawa, A., Yasunishi, A., Yoshino, M., Waterston, R., Lander, E. S., Rogers, J., Birney, E. and Hayashizaki, Y.

TITLE Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs

JOURNAL Nature 420, 563-573 (2002)

MEDLINE 22354683

PUBMED 12466851

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Email: genome-res@sc.riken.jp, URL: http://genome.gsc.riken.jp/  
Alzawa, K., Akimura, T., Arakawa, T., Carninci, P., Fukuda, S., Hirozane, T., Imotani, K., Ishii, Y., Itoh, M., Kawai, J., Komori, H., Miyazaki, A., Murata, M., Nakamura, M., Nomura, K., Numazaki, R., Ohno, M., Sakai, K., Sakazume, N., Sasaki, D., Sato, K., Shiraki, T., Shiraki, T., Tagami, M., Waki, K., Watanabe, A., Muramatsu, M. and Hayashizaki, Y. Direct Submision  
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cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in Riken.  
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prepare mouse tissues.  
Please visit our web site (http://genome.gsc.riken.go.jp) for further details.  
Location/Qualifiers  
1.365  
/organism="Mus musculus"  
/mol\_type="mRNA"  
/strain="C57BL/6J"  
/db\_xref="taxon:10090"  
/clone="K630026J04"  
/tissue\_type="whole body"  
/dev\_stage="16 days embryo"  
/clone\_lib="RIKEN full-length enriched, 16 days embryo whole body"

Alignment of: us-10-726-967a-1 x BY080676 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	10.5
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro 38

192 AGGAAAGGATGTGGGCGAGCCCC 169

Sequence name: r2p2ndb:AY417362

Sequence documentation: 1506 bp DNA linear GSS 17-DEC-2003

LOCUS AY417362 1506 bp DNA linear GSS 17-DEC-2003

DEFINITION Mus musculus BACE gene, VIRTUAL TRANSCRIPT, partial sequence, genomic survey sequence.

ACCESSION AY417362

VERSION AY417362.1 GI:39773322

KEYWORDS GSS.

SOURCE Mus musculus (house mouse)

ORGANISM Mus musculus

REFERENCE Mammalia; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 1506)

AUTHORS Clark, A. G., Glanowski, S., Nielson, R., Thomas, P., Kejarival, A., Todd, M. A., Tanenbaum, D. M., Civeille, D. R., Lu, F., Murphy, B., Ferreira, S., Wang, G., Zheng, X. H., White, T. J., Smutsy, J. J., Adams, M. D. and Cargill, M.

TITLE Inferring nonneutral evolution from human-chimp-mouse orthologous gene trios

JOURNAL Science 302 (5652), 1960-1963 (2003)

PUBMED 14671302

REFERENCE 2 (bases 1 to 1506)

AUTHORS Clark, A. G., Glanowski, S., Nielson, R., Thomas, P., Kejarival, A., Todd, M. A., Tanenbaum, D. M., Civeille, D. R., Lu, F., Murphy, B., Ferreira, S., Wang, G., Zheng, X. H., White, T. J., Smutsy, J. J., Adams, M. D. and Cargill, M.

TITLE Direct Submision

JOURNAL Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA

COMMENT This sequence was made by sequencing genomic exons and ordering them based on alignment.

FEATURES  
location/Qualifiers  
1.1506  
/organism="Mus musculus"  
/mol\_type="genomic DNA"  
/db\_xref="taxon:10090"  
/gene="BACE"  
/locus\_tag="HGM6198"

Alignment of: us-10-726-967a-1 x AY417362 ..

Alignment segment 1/1: (-)

Quality:	27.00	Escore:	17.6
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31	ArgSerGlyLeuGlyGlyAlaPro	38
:::	:::	
326	AGGAAAGGGGTGTGGGGCAGCCCC	303

**This Page Blank (uspto)**

GenCore version 5.1.6  
Copyright (c) 1993 - 2005 Compugen Ltd.

## OM protein - protein search, using sw model

Run on: August 3, 2005, 11:48:45 ; Search time 1 Seconds  
(without alignments)  
1.665 Million cell updates/sec

Title: us-10-726-967a-1  
Perfect score: 104  
Sequence: 1 TQHGIRLPURSG/GCAPLGL 20

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 180 seqs, 83237 residues

Total number of hits satisfying chosen parameters: 180

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 500 summaries

Database : ragdb:\*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match Length	ID	Description
1	104	100.0	ADCB1580	Beta-secretase zym
2	104	100.0	AAU07219	Human aspartyl pro
3	104	100.0	AAE10646	Human Asp-2(b) pro
4	104	100.0	AAE06891	Human Asp2(b) delc
5	104	100.0	AAE02598	Human aspartyl pro
6	104	100.0	AAU06620	Human-pro-Asp-2(b)
7	104	100.0	ABB78607	Human Asp-2(b) delc
8	104	100.0	ADJ94363	Human Asp-2(b) delc
9	104	100.0	ADJ50459	Human Asp2(b) delc
10	104	100.0	ADJ75372	Human Asp2(b) delc
11	104	100.0	ADCB1561	Mature BACE P33K a
12	104	100.0	AAV88433	Human-pro-Asp-2(a)
13	104	100.0	AAU07213	T7-human aspartyl
14	104	100.0	AAE10640	Human-pro-Asp-2(a)
15	104	100.0	AAE06870	Human Asp-2(a)
16	104	100.0	AAE02592	Human-pro-Asp-2(a)
17	104	100.0	AAU06614	Human-pro-Asp-2(a)
18	104	100.0	ABB78601	Human-pro-Asp-2(a)
19	104	100.0	ADJ94338	Human-pro-Asp-2(a)
20	104	100.0	ADJ50434	Human-pro-Asp-2(a)
21	104	100.0	ADP83954	Human BACE1 mutant
22	104	100.0	ADP83951	Human BACE1 mutant
23	104	100.0	ADP83957	Human BACE1 mutant
24	104	100.0	ADJ75347	Human-pro-Asp-2(a)
25	104	100.0	AAU07220	Human aspartyl pro
26	104	100.0	AAE10647	Human Asp-2(b) pro
27	104	100.0	AAE06892	Human Asp2(b) delc
28	104	100.0	AAE02599	Human-pro-Asp-2(b)
29	104	100.0	AAU06621	Human-pro-Asp-2(b)
30	104	100.0	ABB78608	Human Asp-2(b) delc
31	104	100.0	ADJ94365	Human-pro-Asp-2(b)
32	104	100.0	ADJ50461	Human Asp2(b) delc
33	104	100.0	ADJ75374	Human Asp2(b) delc

34	104	100.0	ADJ64641	Mature human pro-b
35	104	100.0	ADP83949	Human BACE1 mutant
36	104	100.0	AAV88431	T7-caespase-human-p
37	104	100.0	AAU07211	T7-human aspartyl
38	104	100.0	AAE10638	T7-human-pro-Asp-2
39	104	100.0	AAE06868	T7-human-pro-Asp2
40	104	100.0	AAE02590	T7-human-pro-Asp-2
41	104	100.0	AAU06612	Human T7-human-pro
42	104	100.0	ABB78599	T7-human-pro-Asp-2
43	104	100.0	ADJ94334	Human T7-human-pro
44	104	100.0	ADJ50430	T7-human-pro-Asp-2
45	104	100.0	ADJ75343	Modified human asp
46	104	100.0	AAV88438	Human Asp-2(a) delc
47	104	100.0	AAU07215	Human aspartyl pro
48	104	100.0	AAE10642	Human Asp-2(a) pro
49	104	100.0	AAE06872	Human Asp2(a) delc
50	104	100.0	AAE02594	Human-Asp-2(a) del
51	104	100.0	AAU06616	Human-pro-Asp-2(a)
52	104	100.0	ABB78603	Human Asp-2(a) delc
53	104	100.0	ADJ94342	Human-pro-Asp-2(a)
54	104	100.0	ADJ50438	Human Asp-2(a) delc
55	104	100.0	ADJ75351	Human Asp-2(a) delc
56	104	100.0	ADJ57781	BACE WT R57DEL pro
57	104	100.0	ADCB1563	Recombinant BACE p
58	104	100.0	ADJ57785	BACE N-Q R56KR57kn
59	104	100.0	ADJ57779	BACE WT R57K prote
60	104	100.0	ADJ57773	BACE WT protein.
61	104	100.0	ADJ57777	BACE WT R56KR57K p
62	104	100.0	ABR61929	Human promemapsin
63	104	100.0	AAV88439	Modified human asp
64	104	100.0	AAV88432	T7-caespase-human-p
65	104	100.0	AAU07212	Human aspartyl pro
66	104	100.0	AAU07216	T7-caespase-human-p
67	104	100.0	AAE10639	Human-Asp-2(a) pro
68	104	100.0	AAE10643	Human-Asp2(a) delc
69	104	100.0	AAE06873	T7-caespase-Human-p
70	104	100.0	AAE06869	Human Asp-2(a) delc
71	104	100.0	AAE02591	T7-caespase-Human-p
72	104	100.0	AAE02595	Human Asp-2(a) del
73	104	100.0	AAU06617	Human-pro-Asp-2(a)
74	104	100.0	AAU06613	Human T7-caespase-H
75	104	100.0	ABB78600	T7-caespase-human-p
76	104	100.0	ABB78604	Human Asp-2(a) delc
77	104	100.0	ADCB1579	BACE construct Asp
78	104	100.0	ADJ94344	Human-pro-Asp-2(a)
79	104	100.0	ADJ94336	Human T7-caespase-h
80	104	100.0	ADJ50432	T7-caespase-Human-p
81	104	100.0	ADJ50440	Human Asp-2(a) delc
82	104	100.0	ADJ75345	T7-caespase-Human-p
83	104	100.0	ADJ75353	Human Asp-2(a) delc
84	104	100.0	AAE07898	Amino acid sequenc
85	104	100.0	ADJ57789	BACE N-Q R57KDEL p
86	104	100.0	ADJ57787	BACE N-Q R57K prot
87	104	100.0	ADJ57775	BACE N-Q protein.
88	104	100.0	ADJ57783	BACE N-Q R56KR57K
89	104	100.0	AAV88426	Human aspartyl pro
90	104	100.0	AAU07203	Human aspartyl pro
91	104	100.0	AAE10630	Human aspartyl pro
92	104	100.0	AAE06860	Human aspartyl pro
93	104	100.0	AAE02582	Human aspartyl pro
94	104	100.0	AAU06604	Human Aspartyl pro
95	104	100.0	ABB06410	Human aspartyl pro
96	104	100.0	ABB06120	Human NS protein 8
97	104	100.0	ABB78591	Human Asp-2(b) pro
98	104	100.0	ADJ94318	Human aspartyl pro
99	104	100.0	ADJ50414	Human aspartyl pro
100	104	100.0	ADJ75327	Human aspartyl pro
101	104	100.0	AAE61334	Memapsin 2 protein
102	104	100.0	AAE65572	Human memapsin 2.
103	104	100.0	ABG78372	Human memapsin
104	104	100.0	ABG78372	Human memapsin 2.
105	104	100.0	ABG76101	Human partial mema
106	104	100.0	ADA74817	Human memapsin 2 p

107	104	100.0	501	1	AAW59807	Amino acid sequenc
108	104	100.0	501	1	AAW59807	Human aspartyl pro
109	104	100.0	501	1	AAW59807	Human beta-secreta
110	104	100.0	501	1	AAW59807	Amino acid sequenc
111	104	100.0	501	1	AAW59807	Human aspartyl pro
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154	104	100.0	501	1	AAW59807	Human aspartyl pro
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178	104	100.0	501	1	AAW59807	Human aspartyl pro
179	104	100.0	501	1	AAW59807	Human aspartyl pro

180 14 13.5 28 1 ADP83926 Human BACE1 isoform

## ALIGNMENTS

RESULT 1  
ADP81580  
ID ADP81580 standard; protein; 425 AA.

AC ADP81580;  
DT 01-JAN-2004 (first entry)

DE Beta-secretase zymogen (pbse) amino acid sequence SEQ ID NO:3.

KW human; BACE; modification; Pro33lys; pro-enzyme.

OS Unidentified.

PN MO2003072733-A2.

PD 04-SEP-2003.

PF 21-FEB-2003; 2003MO-US005508.

PR 21-FEB-2002; 2002US-0358651P.

PA (PHAA) PHARMACIA & UPJOHN CO.

PI Chou K, Howe JM;

PI WPI; 2003-712719/67.

PT BACE polypeptides having Pro33lys modification, useful in determining possible mutations, which will inhibit enzyme activity, and in determining potential active site for target molecules.

PS Disclosure; Fig 3; 38pp; English.

CC The present invention describes an isolated polypeptide (I) comprising or consisting of a fully defined sequence of 432 amino acids (see ADP81561), and comprising human BACE having the modification Pro33lys. Also described: (1) a composition comprising an active human BACE enzyme comprising the pro-enzyme sequence of BACE having the modification Pro33lys; (2) an isolated polynucleotide comprising a sequence encoding (I); (3) an isolated polynucleotide consisting of (2); (4) an expression vector comprising the polynucleotide of (2); or a polynucleotide sequence encoding a Pro33lys-BACE polypeptide, where the expression vector can produce the Pro33lys-BACE polypeptide when present in a compatible host cell, when cultured under conditions that allow production; (5) a recombinant host cell comprising the expression vector; and (6) producing a (active) Pro33lys-BACE polypeptide. The BACE polypeptide having Pro33lys modification may be used in determining possible mutations, which will inhibit enzyme activity, and in determining potential active site for target molecules, and in comprising the BACE polynucleotide is useful for producing recombinant BACE polypeptides having Pro33lys modification. The present sequence represents a beta-secretase zymogen amino acid sequence, which is used in the exemplification of the present invention.

XX Sequence 425 AA;

Query Match 100.0%; Score 104; DB 1; Length 425;  
Best Local Similarity 100.0%; Pred. No.33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
DB 1 TQHGIRLPRLRSGLGAPLGL 20

RESULT 2  
AAU07219  
ID AAU07219 standard; protein, 428 AA.  
XX  
AC AAU07219;  
XX  
DT 24-OCT-2001 (first entry)  
XX  
DE Human aspartyl protease 2b deltatm (huasp-2bdeltatm).  
XX  
KW Human; aspartyl protease 1; Asp-1; nontropic; neuroprotective;  
KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;  
KW beta-secretase; Alzheimer's disease; Huasp-2bdeltatm.  
XX  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT Misc-difference 1 /note= "Encoded by NNN"  
FT Misc-difference 2 /note= "Encoded by NNC"  
FT Misc-difference 61 /note= "Encoded by NNN"  
FT Misc-difference 62 /note= "Encoded by NNN"  
FT Misc-difference 121 /note= "Encoded by NNC"  
FT Misc-difference 122 /note= "Encoded by NNN"  
FT Misc-difference 181 /note= "Encoded by NNG"  
FT Misc-difference 182 /note= "Encoded by NNN"  
FT Misc-difference 241 /note= "Encoded by NNN"  
FT Misc-difference 242 /note= "Encoded by NNC"  
FT Misc-difference 301 /note= "Encoded by NNN"  
FT Misc-difference 302 /note= "Encoded by NNN"  
FT Misc-difference /note= "Encoded by NNT"  
XX  
PN MO200149097-A2.  
XX  
PD 12-JUL-2001.  
XX  
PF 09-MAY-2001; 2001MO-IB000797.  
XX  
PR 09-MAY-2001; 2001MO-IB000797.  
XX  
PA (BIEN/) BIENKOWSKI M J.  
PA (GURN/) GURNEY M E.  
PA (HEIN/) HEINRIKSON R L.  
PA (PARO/) PARODI L A.  
PA (YANR/) YAN R.  
XX  
PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
XX  
DR WPI; 2001-502548/55.  
DR N-PSDB; AAS11732.  
XX  
PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
PT activity.  
XX  
PS Claim 149; Page 167-168; 185pp; English.  
XX  
CC The invention relates to a novel purified polypeptide comprising a  
CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
CC and the fragment retain the beta-secretase activity of the mammalian Asp2  
CC protein. Also included is an isoform of amyloid protein precursor (App)

CC comprising the amino acid sequence of a App or its fragment containing an  
CC App cleavage site recognizable by a mammalian beta-secretase, and further  
CC comprising two lysine residues at the carboxyl terminus of the amino acid  
CC sequence of the mammalian App or App fragment. The polypeptides are used  
CC for assaying for modulators of beta-secretase activity; identifying  
CC agents that inhibit the App processing activity of human Asp2 aspartyl  
CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2  
CC ; and for reducing cellular production of amyloid beta (Abeta) from App.  
CC Agents identified by the above methods are useful for treating  
CC Alzheimer's disease; and for identifying modulators of amyloid-beta  
CC (Abeta) peptide production, for use in designing therapeutics for the  
CC treatment or prevention of Alzheimer's disease. Probes and primers  
CC derived from App nucleic acid sequences are useful for detecting Hu-App  
CC nucleic acids in in vitro assays and in Northern and Southern blots. The  
CC present sequence represents the amino acid sequence of human App-2b delta  
CC TM construct which lacks the transmembrane domain. This construct was  
CC used for bacterial expression and purification of human Asp2b  
XX  
SQ Sequence 428 AA;  
XX  
Query Match 100.0%; Score 104; DB 1; Length 428;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Oy 22 TQHGIRLPKRSGLGAPLGL 41  
Db 22 TQHGIRLPKRSGLGAPLGL 41  
XX  
RESULT 3  
AAE10646  
ID AAE10646 standard; protein, 428 AA.  
XX  
AC AAE10646;  
XX  
DT 10-DEC-2001 (first entry)  
XX  
DE Human-Asp 2(b) protein lacking transmembrane domain.  
XX  
KW Human; aspartyl protease 2b; Asp2b; amyloid precursor protein; APP;  
KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;  
KW amyloid plaque; neuronal loss; proteolytic; nontropic; neuroprotective.  
XX  
OS Homo sapiens.  
OS Synthetic.  
XX  
PN GB2357767-A.  
XX  
PD 04-JUL-2001.  
XX  
PF 22-SEP-2000; 2000GB-00023315.  
XX  
PR 23-SEP-1999; 99US-00404133.  
PR 23-SEP-1999; 99US-0155493P.  
PR 23-SEP-1999; 99WO-US020881.  
PR 13-OCT-1999; 99US-00415901.  
PR 06-DEC-1999; 99US-0169232P.  
XX  
PA (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
PI Bienkowski MJ, Gurney M;  
XX  
DR WPI; 2001-444208/48.  
DR N-PSDB; AAD17895.  
XX  
PT Polypeptide comprising fragments of human aspartyl protease with amyloid  
PT precursor protein processing activity and alpha-secretase activity, for  
PT identifying modulators useful in treating Alzheimer's disease.  
XX  
PS Example 10; Page 138-139; 187pp; English.  
XX  
CC The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1  
CC proteins which lack transmembrane domain or amino terminal domain or



CC cytoplasmic domain and retains alpha-secretase activity and amyloid  
 CC protein precursor (APP) processing activity. The proteins of the  
 CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which  
 CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase  
 CC activity, where modulators that increase hu-Asp1 alpha-secretase activity  
 CC are useful for treating Alzheimer's disease (AD) which causes progressive  
 CC dementia with consequent formation of amyloid plaques, neurofibrillary  
 CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful  
 CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein  
 CC with the substrate under acidic conditions and determining the level of  
 CC hu-Asp1 proteolytic activity. The present sequence is human Asp 2(b)  
 CC protein lacking a transmembrane (TM) domain. This sequence is generated  
 CC by the deletion of the C-terminal TM domain and intracellular domains of  
 CC human Asp 2(b) protein

SO Sequence 428 AA;  
 Query Match 100.0%; Score 104; DB 1; Length 428;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGIGCAPLGL 41  
 Db 22 TQHGIRLPURSGIGCAPLGL 41

RESULT 4  
 AAE06891  
 ID AAE06891 standard; protein; 428 AA.

AC AAE06891;

DT 23-OCT-2001 (first entry)

DE Human-Asp2(b) deltaTM protein.

KW Human; aspartyl protease 2b; Asp 2b; beta-amyloid precursor protein; APP;  
 KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;  
 KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nototropic;  
 KW neuroprotective; antisense therapy; Asp2(b) deltaTM protein;  
 KW gene therapy.

OS Homo sapiens.  
 OS Synthetic.

PN WO200150829-A2.

PD 19-JUL-2001.

PF 09-MAY-2001; 2001WO-IB000799.

PR 09-MAY-2001; 2001WO-IB000799.

PA (BIEN/) BIENKOWSKI M J.  
 PA (GURN/) GURNEY M E.  
 PA (HEIN/) HEINRIKSON R L.  
 PA (BARO/) PARODI L A.  
 PA (YANR/) YAN R.

PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

DR WPI; 2001-483072/52.  
 DR N-PSDB; AAD13276.

PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.

PS Claim 149; Page 167-168; 185pp; English.

CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid  
 CC precursor protein (APP) isoforms and their corresponding DNA molecules.

CC Human aspartyl proteases can act as beta-secretase proteases useful for  
 CC treating Alzheimer's disease. APP isoforms are useful for identifying  
 CC modulators of amyloid-beta peptide production, for use in designing  
 CC therapeutics for the treatment and prevention of Alzheimer's disease,  
 CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis  
 CC and neuronal loss. APP isoforms are also used in methods for identifying  
 CC inhibitors and modulators of human Asp2 activity. The invention relates  
 CC to a method for identifying agents that modulate the activity of human  
 CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
 CC as a means to screen in cellular assays for the inhibitors of beta- and  
 CC gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in  
 CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
 CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.  
 CC The present sequence is Human aspartyl protease 2b (Hu-Asp2b) deltaTM  
 CC protein which is obtained by the deletion of C-terminal transmembrane and  
 CC intracellular domains of Hu-Asp2b. Human Asp2b has beta-secretase  
 CC activity

SO Sequence 428 AA;  
 Query Match 100.0%; Score 104; DB 1; Length 428;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGIGCAPLGL 41  
 Db 22 TQHGIRLPURSGIGCAPLGL 41

RESULT 5  
 AAE02598  
 ID AAE02598 standard; protein; 428 AA.

AC AAE02598;

DT 10-AUG-2001 (first entry)

DE Human aspartyl protease 2 (b) delta TM protein.

KW Human; alpha-secretase; amyloid precursor protein; APP; therapy;  
 KW Alzheimer's disease; antialzheimer's; aspartyl protease 2; Asp 2;  
 KW beta-secretase; chromosome 11q23.3-24.1; mutant; mutein.

OS Homo sapiens.  
 OS Synthetic.

PN WO200123533-A2.

PD 05-APR-2001.

PF 22-SEP-2000; 2000WO-US026080.

PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99WO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 PR 06-DEC-1999; 99US-0169232P.

PA (PHNA ) PHARMACIA & UPJOHN CO.

PI Gurney M, Bienkowski MJ;

DR WPI; 2001-290516/30.  
 DR N-PSDB; AAD06768.

PT Enzymes that cleave the alpha-secretase site of the amyloid precursor  
 PT protein, useful for the treatment of Alzheimer's disease.

PS Example 10; Page 166-167; 189pp; English.

CC The present invention relates to enzymes for cleaving the alpha-  
 CC secretase site of the amyloid precursor protein (APP) and methods of  
 CC identifying those enzymes. The methods may be used to identify enzymes  
 CC that may be used to cleave the alpha-secretase cleavage site of the APP

CC protein. The enzymes may be used to treat or modulate the progress of  
 CC Alzheimer's disease. The present sequence is human aspartyl protease 2  
 CC (Asp 2) (b) delta TM protein. The Asp 2 gene is located on chromosome  
 CC 11q23.3-24.1. The Asp 2 has beta-secretase protease activity  
 CC  
 SQ Sequence 428 AA;

Query Match 100.0%; Score 104; DB 1; Length 428;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41  
 DB 22 TQHGIRLPLRSGLGAPLGL 41

RESULT 6  
 AAU06620  
 ID AAU06620 standard; protein; 428 AA.

AC AAU06620;

DT 24-OCT-2001 (first entry)

DE Human-pro-Asp 2(b) delta TM.

KM Human; Aspartyl protease; beta-secretase; nootropic; Asp2;  
 KM neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;  
 KM amyloid-beta; Abeta; Human-pro-Asp 2(b) delta TM; mutant; mutein.

OS Homo sapiens.

OS Synthetic.

PN WO200149098-A2.

PD 12-JUL-2001.

PF 09-MAY-2001; 2001WO-IB000798.

PR 09-MAY-2001; 2001WO-IB000798.

XX (BIEN/) BIENKOWSKI M J.

PA (GURN/) GURNEY M E.

PA (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.

PA (YANR/) YAN R.

PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

DR WPI; 2001-502549/55.

PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.

PS Claim 149; Page 167-168; 185pp; English.

XX The invention relates to a purified polypeptide comprising a fragment of  
 CC mammalian aspartyl protease (Asp2) protein which lacks the Asp2  
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and  
 CC the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. The invention also details polynucleotides for the Asp proteins  
 CC and vectors expressing them, and a polypeptide (isoform of amyloid  
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or  
 CC its fragment containing an APP cleavage site recognizable by a mammalian  
 CC beta-secretase, and further comprising two lysine residues at the  
 CC carboxyl termini of the amino acid sequence of the mammalian APP or APP  
 CC fragment. Also included in the invention are methods of identifying  
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
 CC useful for treating Alzheimer's disease. APP is useful in methods for  
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-  
 CC beta (Abeta) peptide production. APP is also useful in designing

CC therapeutics for the treatment or prevention of Alzheimer's disease. APP  
 CC comprising the APP-Sw-beta-secretase peptide sequence (NDA), which is  
 CC associated with increased levels of Abeta processing is useful in assays  
 CC relating the Alzheimer's research. The expression vector is useful for  
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp  
 CC oligonucleotides are useful as probes or primers. The probes are useful  
 CC for detecting hu-Asp nucleic acids in in vitro assays and in Northern and  
 CC Southern blots. The present sequence is Human-pro-Asp 2(b) delta TM  
 CC protein, which lacks the C-terminal transmembrane domain  
 CC  
 SQ Sequence 428 AA;

Query Match 100.0%; Score 104; DB 1; Length 428;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41  
 DB 22 TQHGIRLPLRSGLGAPLGL 41

RESULT 7  
 ABB78607  
 ID ABB78607 standard; protein; 428 AA.

AC ABB78607;

DT 16-JUN-2002 (first entry)

DE Human Asp-2(b) delta TM protein sequence SEQ ID NO:51.

KM Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;  
 KM Chromosome 11q23.3-24.1.

OS Homo sapiens.

PN GB2367060-A.

PD 27-MAR-2002.

PF 29-OCT-2001; 2001GB-00025934.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155483P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

PR 06-DEC-1999; 99US-0169232P.

PR 22-SEP-2000; 2000GB-00023315.

XX (PHAA ) PHARMACIA & UPJOHN CO.

PI Bienkowski MJ, Gurney M;

DR WPI; 2002-397167/43.

DR N-PSDB; ABL52487.

PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.

PS Example 10; Page 138-139; 182pp; English.

XX The present invention describes a human aspartyl protease 1 (hu-Asp1)  
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,  
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1  
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a  
 CC nucleotide sequence that hybridizes under stringent conditions to the non-  
 CC coding strand complementary to a defined 1804 nucleotide sequence (see  
 CC AB152456) where the nucleotide sequence encodes a polypeptide having Asp1  
 CC proteolytic activity and lacks nucleotides encoding a transmembrane  
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that

hybridises under stringent conditions to (iii) (the nucleotide sequence encodes a polypeptide further lacking a pro-peptide domain corresponding to amino acids 23-62 of hu-Asp1 (see AB078583)) (4) a vector (iv) comprising (iii) or (iii') and (5) a host cell (v) transformed or transfected with (iii), (iii') and/or (iv). The hu-Asp1 protease substrate (i) may be used as an enzyme substrate in assays to detect aspartyl protease activity, (ii) and therefore and diagnose diseases associated with aberrant hu-Asp1 expression and activity such as Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present sequence represents human Asp-2(b)deltaTM, which is given in an example from the present invention

Query Match  
Best Local Similarity 100.0%; Score 104; DB 1; Length 428;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
22 TOHGIRLPRLRSGLGAPLGL 41  
22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 8

ADJ94363  
ID ADJ94363 standard; protein; 428 AA.

AC ADJ94363;

DT 03-JUN-2004 (first entry)

DE Human-pro-Asp-2(b)deltaTM.

XX Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

KW neurotropic; neuroprotective; amyloid beta; mutant; mutein.

XX Homo sapiens.

OS Synthetic.

PN US6706485-B1.

PD 16-MAR-2004.

PF 12-APR-2000; 2000US-00548376.

PR 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA ) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

PI WPI, 2004-236722/22.

DR N-PSDB; ADJ94362.

XX Identifying agents that modulate activity of Asp2 aspartyl protease

PT useful for treating or preventing Alzheimer's disease involves comparing

PP APP processing activity of protease in presence and absence of test

PT agent.

XX Example 10; SEQ ID NO 51; 109pp; English.

XX The invention relates to identifying agents that modulate activity of

CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,

CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid

CC precursor protein (APP) in the presence and absence of a test agent,

CC where Asp2 is a recombinant polypeptide and processes APP into amyloid

of the test agent, and comparing the activities to identify agents that modulate the activity of Asp2. Also disclosed are the cDNA and proteins for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising the vector and the method of producing Hu-Asp polypeptide, an isolated antibody that specifically binds to Hu-Asp polypeptide, identifying a cell that can be used to screen for inhibitors of beta secretase activity, novel isoforms of amyloid protein precursor (APP), where the last 2 carboxy terminus amino acids of that isoform are both lysine residues (e.g. those designated APP695-KK or carrying the Swedish mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful for assaying for beta secretase activity and screening for inhibitors of beta-secretase) and polynucleotides that encode the APP proteins. The method is useful for identifying agents that modulate the activity (amyloid precursor protein processing activity) of Asp2 aspartyl protease. Preferably, the method is useful for identifying agents that inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid precursor protein processing are useful for treating or preventing Alzheimer's disease. The present sequence represents an aspartyl protease mutant construct (e.g. lacking a transmembrane domain and/or including a caspase cleavage site) used to investigate the cleavage activity of Asp2 proteins.

Query Match  
Best Local Similarity 100.0%; Score 104; DB 1; Length 428;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
22 TOHGIRLPRLRSGLGAPLGL 41  
22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 9

ADJ50459  
ID ADJ50459 standard; protein; 428 AA.

AC ADJ50459;

DT 29-JUL-2004 (first entry)

DE Human Asp2(b)deltaTM mutant protein.

XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;

KM Alzheimer's disease; gene therapy; human; mutant; mutein.

XX Homo sapiens.

OS Synthetic.

PN US6737510-B1.

PD 18-MAY-2004.

PF 12-APR-2000; 2000US-00548373.

PR 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA ) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

PI WPI, 2004-387112/36.

DR N-PSDB; ADJ50458.

XX New Asp2 aspartyl protease protein comprising tripeptides DNG and DSG

PT involved in processing amyloid precursor protein into amyloid beta,

PP useful in preparing a composition for treating or preventing Alzheimer's

PT disease.  
 XX  
 PS Example 10; SEQ ID NO 51; 108bp; English.  
 CC The invention relates to a method for identifying an agent that decreases  
 CC the protease activity of the aspartyl protease (Asp) polypeptide. It also  
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
 CC cleavage site of the amyloid precursor protein (APP). The invention is  
 CC useful in preparing a composition for treating or preventing Alzheimer's  
 CC disease. It is also useful in gene therapy. The present sequence is human  
 CC Asp2(b) mutant protein. This sequence is used to illustrate the method of  
 CC the invention.  
 XX  
 SQ Sequence 428 AA;  
 Query Match 100.0%; Score 104; DB 1; Length 428;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 22 TQHGIRLPRLRSGLGAPLGL 41  
 Db 22 TQHGIRLPRLRSGLGAPLGL 41  
 RESULT 10  
 ID ADR75372 standard; protein; 428 AA.  
 XX  
 AC ADR75372;  
 XX  
 DT 18-NOV-2004 (first entry)  
 XX  
 DE Human Asp2(b) deltatm mutant protein.  
 XX  
 KM Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;  
 KM chromosome identification; Alzheimer's disease; human; mutant.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 OS  
 PN US2004166507-A1.  
 XX  
 PD 26-AUG-2004.  
 XX  
 PF 29-AUG-2003; 2003US-00652045.  
 XX  
 PR 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 13-OCT-1999; 99US-00416901.  
 XX  
 PA (GURN/) GURNEY M E.  
 PA (BIEN/) BIENKOWAKI M J.  
 PA (HEIN/) HEINRIKSON R L.  
 PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.  
 PI Gurney ME, Bienkowaki MJ, Heinrichson RL, Parodi LA, Yan R;  
 DR WPI; 2004-624916/60.  
 DR N-PSDB; ADR75371.  
 XX  
 PT Novel purified/isolated polynucleotide encoding polypeptide having  
 PT aspartyl protease activity involved in processing amyloid precursor  
 PT protein into amyloid beta, useful in identifying agent decreasing  
 PT activity of aspartyl protease.  
 XX  
 XX Example 10; SEQ ID NO 51; 107bp; English.  
 CC The invention relates to nucleic acid sequences encoding aspartyl  
 CC protease (Asp) polypeptides having aspartyl protease activity involved in  
 CC processing amyloid precursor protein (APP) into amyloid beta. The  
 CC invention also relates to a method for identifying an agent that

CC decreases the protease activity of the Asp. Asp DNA is useful in  
 CC... chromosome identification as they can hybridise with a specific location  
 CC on a human chromosome and in identifying the relationship between genes  
 CC and diseases (particular gene responsible for causing diseases). It is  
 CC also useful for identifying candidates to modulate the progression of  
 CC Alzheimer's disease. Asp is useful in raising antibodies that are useful  
 CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The  
 CC present sequence is the human Asp2(b) deltatm mutant protein. This  
 CC sequence is used to illustrate the method of the invention.  
 XX  
 SQ Sequence 428 AA;  
 Query Match 100.0%; Score 104; DB 1; Length 428;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 22 TQHGIRLPRLRSGLGAPLGL 41  
 Db 22 TQHGIRLPRLRSGLGAPLGL 41  
 RESULT 11  
 ID ADC81561 standard; protein; 432 AA.  
 XX  
 AC ADC81561;  
 XX  
 DT 01-JAN-2004 (first entry)  
 XX  
 DE Mature BACE P33K amino acid sequence SEQ ID NO:2.  
 XX  
 KM human; BACE; modification; Pro33lys; pro-enzyme.  
 XX  
 OS Synthetic.  
 OS Homo sapiens.  
 XX  
 FN WO2003072733-A2.  
 XX  
 PD 04-SEP-2003.  
 XX  
 PF 21-FEB-2003; 2003WO-US005508.  
 XX  
 PR 21-FEB-2002; 2002US-0358651P.  
 XX  
 PA (PHAA ) PHARMACIA & UPJOHN CO.  
 PA Chou X, Howe JW;  
 PI WPI; 2003-712719/67.  
 DR N-PSDB; ADC81562.  
 DR  
 DR BACE polypeptides having Pro33lys modification, useful in determining  
 PT possible mutations, which will inhibit enzyme activity, and in  
 PT determining potential active site for target molecules.  
 XX  
 PS Claim 10; SEQ ID NO 2; 38bp; English.  
 XX  
 CC The present invention describes an isolated polypeptide (I) comprising or  
 CC consisting of a fully defined sequence of 432 amino acids (see ADC81561),  
 CC and comprising human BACE having the modification Pro33lys. Also  
 CC described: (1) a composition comprising an active human BACE enzyme  
 CC comprising the pro-enzyme sequence of BACE having the modification  
 CC Pro33lys; (2) an isolated polynucleotide comprising a sequence encoding  
 CC (1); (3) an isolated polynucleotide consisting or comprising of  
 CC nucleotides 70-1365 of a 1355-bp sequence (see ADC81562); (4) an  
 CC expression vector comprising the polynucleotide of (2), or a  
 CC polynucleotide sequence encoding a Pro33lys-BACE polypeptide, where the  
 CC expression vector can produce the Pro33lys-BACE polypeptide when present  
 CC in a compatible host cell, when cultured under conditions that allow  
 CC production; (5) a recombinant host cell comprising the expression vector;  
 CC and (6) producing a (active) Pro33lys-BACE polypeptide. The BACE  
 CC polypeptide having Pro33lys modification may be used in determining  
 CC possible mutations, which will inhibit enzyme activity, and in

CC determining potential active site for target molecules. The vector  
 CC comprising the BACE polynucleotide is useful for producing recombinant  
 CC BACE polypeptides having Pro33ys modification. The present sequence  
 CC represents the mature recombinant BACE p33k amino acid sequence used in  
 CC the exemplification of the present invention.

XX Sequence 432 AA;

Query Match 100.0%; Score 104; DB 1; Length 432;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
 DB 1 TQHGIRLPRLRSGLGAPLGL 20

#### RESULT 12

AAV88433 standard; protein; 433 AA.

AC AAV88433;  
 XX  
 DT 12-SEP-2003 (revised)  
 DT 06-AUG-2003 (revised)  
 DT 03-AUG-2000 (first entry)  
 XX  
 DE Human-pro-Asp-2(a)-deltatm amino acid sequence.

KW Aspartyl protease; aspartase; amyloid precursor protein; App; Asp 2;  
 KW Alzheimer's disease; beta secretase site; human-pro-Asp-2(a)-deltatm.  
 OS Homo sapiens.  
 OS Enterobacteria phage T7.  
 XX Chimeric.

PN MO200017369-A2.

PD 30-MAR-2000.

PF 23-SEP-1999; 99WO-US020881.

PR 24-SEP-1998; 98US-0101594P.

PA (PHAA) PHARMACTA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

DR WPI; 2000-303209/26.

DR N-PSDB; AAA15670.

PT New enzyme designated human aspartase useful in research into Alzheimer's  
 PT Disease is capable of cleaving amyloid protein precursor at the beta  
 PT secretase site to produce amyloid beta peptide.

XX Example 9; Fig 8; 183pp; English.

PS This sequence represents a modified version of the human aspartase 2  
 CC (Asp2) amino acid sequence. The sequence is used in the bacterial  
 CC expression of human Asp2L. The invention relates to a protease (e.g.  
 CC Asp2) capable of cleaving the beta secretase site of amyloid precursor  
 CC protein (App). The protease contains a sequence encoding the amino acid  
 CC sequence DTG and a sequence encoding DSG or DTG separated by 100-300  
 CC amino acids. When mutated the App gene causes an autosomal dominant form  
 CC of Alzheimer's disease. App localises to the cell surface membrane and  
 CC have a single C-terminal transmembrane domain. Proteolytic processing of  
 CC App produces the amyloid beta protein, which is possibly very important  
 CC in Alzheimer's disease. The invention includes a nucleotide sequence  
 CC encoding the protease, a vector containing the nucleotide sequence, and a  
 CC cell line comprising the vector. Methods for screening for inhibitors of  
 CC beta secretase activity are also given in the invention. The human  
 CC aspartase protein and nucleotide sequences and the methods for  
 CC identifying inhibitors of the protease, are useful in the treatment of

CC and research in to Alzheimer's disease. (Updated on 06-AUG-2003 to  
 CC correct OS field.) (Updated on 12-SEP-2003 to standardise OS field)  
 CC  
 XX Sequence 433 AA;

Query Match 100.0%; Score 104; DB 1; Length 433;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
 DB 2 TQHGIRLPRLRSGLGAPLGL 21

#### RESULT 13

AAU07213 standard; protein; 433 AA.

AC AAU07213;

DT 11-SEP-2003 (revised)

DT 24-OCT-2001 (first entry)

XX T7-human aspartyl protease 2a deltatm (low GC).

KW Human; aspartyl protease 1; Asp-1; noctropic; neuroprotective;  
 KW aspartyl protease 2; Asp2; amyloid protein precursor; App;  
 KW beta-secretase; Alzheimer's disease.

OS Homo sapiens.

OS Enterobacteria phage T7.

PN MO200149097-A2.

PD 12-JUL-2001.

PF 09-MAY-2001; 2001WO-IB000797.

PR 09-MAY-2001; 2001WO-IB000797.

PA (BIEN/) BIENKOWSKI M J.

PA (GURN/) GURNEY M E.

PA (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.

PA (YANR/) YAN R.

PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

DR WPI; 2001-502548/55.

DR N-PSDB; AAS11713.

PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.

XX Example 9; Fig 8; 185pp; English.

PS The invention relates to a novel purified polypeptide comprising a  
 CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. Also included is an isoform of amyloid protein precursor (App)  
 CC comprising the amino acid sequence of a App or its fragment containing an  
 CC App cleavage site recognisable by a mammalian beta-secretase, and further  
 CC comprising two lysine residues at the carboxyl terminus of the amino acid  
 CC sequence of the mammalian App or App fragment. The polypeptides are used  
 CC for assaying for modulators of beta-secretase activity; identifying  
 CC agents that inhibit the App processing activity of human Asp2 aspartyl  
 CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2  
 CC; and for reducing cellular production of amyloid beta (Abeta) from App.  
 CC Agents identified by the above methods are useful for treating  
 CC Alzheimer's disease; for identifying modulators of amyloid-beta (Abeta)



CC and neuronal loss. APP isoforms are also used in methods for identifying  
CC inhibitors and modulators of human Asp2 activity. The invention relates  
CC to a method for identifying agents that modulate the activity of human  
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
CC as a means to screen in cellular assays for the inhibitors of beta- and  
CC gamma- secretase. Hu-APP DNA fragments are useful as probes or primers in  
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
CC APP nucleic acids in *in vitro* assays and in Northern and Southern blots.  
CC The present sequence is Human-pro-Asp2(1) protease 2a (Asp2a) deltaTM  
CC (low GC) protein which is obtained by the deletion of C-terminal  
CC transmembrane domain and change of degenerate codons bases in 15 amino  
CC acid positions from G/C to A/T in the Hu-Asp2a. Human Asp2a has beta-  
CC secretase activity  
SQ Sequence 433 AA;

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TQHGIRLPLRSGIGAPLGL 41  
DB 2 TQHGIRLPLRSGIGAPLGL 21

RESULT 16  
AAE02592  
ID AAE02592 standard; protein; 433 AA.  
XX  
AC AAE02592;  
XX  
DT 10-AUG-2001 (first entry)  
XX  
DE Human-Pro-Asp-2(a) deltaTM protein.  
XX  
KW Human; alpha-secretase; amyloid precursor protein; APP; therapy;  
KW Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp2a;  
XX beta-secretase; Asp-2a delta TM.  
OS Homo sapiens.  
OS Synthetic.  
PN WO200123533-A2.  
XX  
PD 05-APR-2001.  
XX  
PE 22-SEP-2000; 2000WO-US026080.  
XX  
PR 23-SEP-1999; 99US-0155493P.  
PR 23-SEP-1999; 99WO-US020881.  
PR 13-OCT-1999; 99US-00416901.  
PR 06-DEC-1999; 99US-0169232P.  
XX  
PA (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
PI Gurney M, Bienkowski MJ;  
XX  
DR WPI; 2001-290516/30.  
DR N-PSDB; AAD06750.  
XX  
PT Enzymes that cleave the alpha-secretase site of the amyloid precursor  
XX protein, useful for the treatment of Alzheimer's disease.  
XX  
PS Example 9; Page 155-156; 189pp; English.  
XX  
CC The present invention relates to enzymes for cleaving the alpha-  
CC secretase site of the amyloid precursor protein (APP) and methods of  
CC identifying those enzymes. The methods may be used to identify enzymes  
CC that may be used to cleave the alpha-secretase cleavage site of the APP  
CC protein. The enzymes may be used to treat or modulate the progress of  
CC Alzheimer's disease. The present sequence is human Aspartyl protease 2a  
CC (Asp-2a) deltaTM protein which is obtained by deleting the transmembrane  
CC domain and adding a TY tag at the N-terminal end. This sequence has beta-

CC secretase protease activity. Note: The present sequence is also shown in  
CC figure 8 of the specification, but lacks amino acid residues at its C-  
CC terminal end  
XX

SQ Sequence 433 AA;

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TQHGIRLPLRSGIGAPLGL 41  
DB 2 TQHGIRLPLRSGIGAPLGL 21

RESULT 17  
AAU06614  
ID AAU06614 standard; protein; 433 AA.  
XX  
AC AAU06614;  
XX  
DT 24-OCT-2001 (first entry)  
XX  
DE Human-pro-Asp 2(a) delta TM (low GC).  
XX  
KW Human; Aspartyl protease; beta-secretase; nontropic; Asp2;  
KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;  
XX amyloid-beta; Abeta; Human-pro-Asp 2(a) delta TM (low GC).  
OS Homo sapiens.  
OS Synthetic.  
PN WO200149098-A2.  
XX  
PD 12-JUL-2001.  
XX  
PE 09-MAY-2001; 2001WO-IB000798.  
XX  
PR 09-MAY-2001; 2001WO-IB000798.  
XX  
PA (BIEN/) BIENKOWSKI M J.  
PA (GURN/) GURNEY M E.  
PA (HEIN/) HEINRIKSON R L.  
PA (PARO/) PARODI L A.  
PA (YANR/) YAN R.  
XX  
PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
XX  
DR WPI; 2001-502549/55.  
DR N-PSDB; AAS11528.  
XX  
PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
XX protease 2, lacking Asp2 transmembrane domain and retaining beta  
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2  
XX activity.  
XX  
PS Example 9; Fig 8; 185pp; English.  
XX  
XX

CC The invention relates to a purified polypeptide comprising a fragment of  
CC mammalian aspartyl protease (Asp)2 protein which lacks the Asp2  
CC transmembrane domain and the Asp2 protein, and where the polypeptide and  
CC the fragment retain the beta-secretase activity of the mammalian Asp2  
CC protein. The invention also details polynucleotides for the APP protein  
CC and vectors expressing them, and a polypeptide (isoform of amyloid  
CC protein precursor (APP)) comprising the amino acid sequence of amyloid  
CC beta-secretase, and further comprising two lysine residues at the  
CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP  
CC fragment. Also included in the invention are methods of identifying  
CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
CC useful for treating Alzheimer's disease. APP is useful in methods for  
CC identifying inhibitors or modulators of human Asp2 activity and amyloid-  
CC beta (Abeta) peptide production. APP is also useful in designing



CC therapeutic for the treatment or prevention of Alzheimer's disease. APP  
CC comprising the APP-Sw-beta-secretase peptide sequence (NIDA), which is  
CC associated with increased levels of Abeta processing is useful in assays  
CC relating the Alzheimer's research. The expression vector is useful for  
CC recombinantly expressing APP. Nucleic acids that hybridize to Asp  
CC oligonucleotides are useful as probes or primers. The probes are useful  
CC for detecting hu-Asp nucleic acids in in vitro assays and in Northern and  
CC Southern blots. The present sequence is Human-pro-Asp 2(a) delta TM (low  
CC GC), a synthetic version of Asp 2(a) whose GC content has been altered to  
CC facilitate expression in E.coli

XX Sequence 433 AA;  
SQ

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41  
Db 2 TONGIRLPLRSGLGAPLGL 21

RESULT 18  
ABB78601  
ID ABB78601 standard; protein; 433 AA.  
XX  
AC ABB78601;  
XX  
DT 16-JUL-2002 (first entry)  
XX  
DE Human-pro-Asp-2(a)deltaTM (low GC) protein sequence SEQ ID NO:26.  
XX  
KW Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;  
KW amyloid precursor protein; APP.  
XX  
OS Homo sapiens.  
XX  
PN GB2367060-A.  
XX  
PD 27-MAR-2002.  
XX  
PF 29-OCT-2001; 2001GB-00025934.  
XX  
PR 23-SEP-1999; 99US-00404133.  
PR 23-SEP-1999; 99US-0155493P.  
PR 23-SEP-1999; 99WC-US020881.  
PR 13-OCT-1999; 99US-00416901.  
PR 06-DEC-1999; 99US-0169232P.  
PR 22-SEP-2000; 2000GB-00023315.  
XX  
PA (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
PI Bienkowiecki MJ, Gurney M;  
XX  
DR WPI; 2002-397167/43.  
XX  
DR N-PSDB; ABL52468.  
XX  
PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
PT protease activity, e.g. for the diagnosis of Alzheimer's disease.  
XX  
XX Example 9; Fig 8; 182pp; English.

XX The present invention describes a human aspartyl protease 1 (hu-Asp1)  
XX substrate (I) which comprises a peptide of no more than 50 amino acids,  
XX and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
XX Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
XX proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
XX (1) under acidic conditions; and (b) determining the level of hu-Asp1  
XX proteolytic activity; (2) a purified polynucleotide (III) comprising a  
XX nucleotide sequence that hybridizes under stringent conditions to the non  
XX coding strand complementary to a defined 1804 nucleotide sequence (see  
XX ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1  
XX proteolytic activity and lacks nucleotides encoding a transmembrane

CC domain); (3) a purified polynucleotide (III') comprising a sequence that  
CC hybridizes under stringent conditions to (III) (the nucleotide sequence  
CC encodes a polypeptide further lacking a pro-peptide domain corresponding  
CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)  
CC comprising (III) or (III') and (5) a host cell (V) transformed or  
CC transfected with (III), (III'), and/or (IV). The hu-Asp1 protease  
CC substrate (I) may be used as an enzyme substrate in assays to detect  
CC aspartyl protease activity, (II) and therefore diagnose diseases  
CC associated with aberrant hu-Asp1 expression and activity such as  
CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
CC sequence represents human-pro-Asp-2(a)deltaTM (low GC), which is given in  
CC an example from the present invention

XX Sequence 433 AA;  
SQ

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41  
Db 2 TONGIRLPLRSGLGAPLGL 21

RESULT 19  
ADJ94338  
ID ADJ94338 standard; protein; 433 AA.  
XX  
AC ADJ94338;  
XX  
DT 03-JUN-2004 (first entry)  
XX  
DE Human-pro-Asp-2(a)deltaTM (low GC).  
XX  
KW Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);  
KW beta secretase; amyloid protein precursor; APP; Alzheimer's disease;  
KW neurotropic; neuroprotective; amyloid beta; mutant; mutein.  
XX  
OS Homo sapiens.  
XX  
OS Synthetic.  
XX  
PN US6706485-B1.  
XX  
PD 16-MAR-2004.  
XX  
PF 12-APR-2000; 2000US-00548376.  
XX  
PR 24-SEP-1998; 98US-0101594P.  
PR 23-SEP-1999; 99US-00404133.  
PR 23-SEP-1999; 99US-0155493P.  
PR 23-SEP-1999; 99WC-US020881.  
PR 13-OCT-1999; 99US-00416901.  
XX  
PA (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
PI Gurney MR, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;  
XX  
DR WPI; 2004-236722/22.  
XX  
DR N-PSDB; ADJ94337.  
XX  
PT Identifying agents that modulate activity of Asp2 aspartyl protease  
PT useful for treating or preventing Alzheimer's disease involves comparing  
PT APP processing activity of protease in presence and absence of test  
PT agent.  
XX  
XX Example 9; SEQ ID NO 26; 109pp; English.

XX The invention relates to identifying agents that modulate activity of  
XX Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
XX encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
XX precursor protein (APP) in the presence and absence of a test agent,  
XX where Asp2 is a recombinant polypeptide and processes APP into amyloid

CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptides, an isolated  
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy terminus amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NM, designated e.g. APP695-SW  
 CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the activity  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease. Preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence represents an aspartyl protease  
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a  
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2  
 CC proteins.

XX Sequence 433 AA;

Query Match Best Local Similarity 100.0%; Score 104; DB 1; Length 433;

ADP83954 ID ADP83954 standard; protein; 433 AA.

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGIGAPLGL 41

Db 2 TQHGIRLPRLRSGIGAPLGL 21

RESULT 20

ADP83954 ID ADP83954 standard; protein; 433 AA.

XX ADP83954;

XX 29-JUL-2004 (first entry)

XX Human-pro-Asp-2(a) deltatm mutant protein.

XX Aspartyl protease, Asp; beta secretase; amyloid precursor protein; APP;

XX Alzheimer's disease; gene therapy; human; mutant; mutein.

XX Homo sapiens.

XX Synthetic.

XX US6737510-B1.

XX 18-MAY-2004.

XX 12-APR-2000; 2000US-00548373.

XX 24-SEP-1998; 98US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WO-US020881.

XX 13-OCT-1999; 99US-00416901.

XX (PHAA ) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

XX WPI, 2004-387112/36.

XX N-PSDB; ADO50433.

XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG

PT involved in processing amyloid precursor protein into amyloid beta,

PT useful in preparing a composition for treating or preventing Alzheimer's

PT disease.

PS Example 9; SEQ ID NO 26; 108pp; English.

CC The invention relates to a method for identifying an agent that decreases  
 CC the protease activity of the aspartyl protease (Asp) polypeptide. It also  
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
 CC cleavage site of the amyloid precursor protein (APP). The invention is  
 CC useful in preparing a composition for treating or preventing Alzheimer's  
 CC disease. It is also useful in gene therapy. The present sequence is human  
 CC pro-Asp-2(a) deltatm mutant protein. This sequence is used to illustrate  
 CC the method of the invention.

XX Sequence 433 AA;

Query Match Best Local Similarity 100.0%; Score 104; DB 1; Length 433;

ADP83954 ID ADP83954 standard; protein; 433 AA.

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGIGAPLGL 41

Db 2 TQHGIRLPRLRSGIGAPLGL 21

RESULT 21

ADP83954 ID ADP83954 standard; protein; 433 AA.

XX ADP83954;

XX 23-SEP-2004 (first entry)

XX Human BACE1 mutant amino acid sequence SEQ ID NO:81.

XX human; beta-site amyloid precursor protein cleaving enzyme 1;

XX beta-site APP cleaving enzyme 1; BACE1; BACE1 isoform A; chromosome 11;

XX prodomain; engineered cleavage site; protease domain; neuroprotective;

XX nootropic; gene therapy; Alzheimer's disease; Down's syndrome; mutant.

XX Homo sapiens.

XX Synthetic.

XX WO2004056962-A2.

XX 08-JUL-2004.

XX 02-DEC-2003; 2003WO-US038314.

XX 04-DEC-2002; 2002US-0430984P.

XX (SUNE-) SUNESIS PHARM INC.

XX Ballinger M;

XX WPI; 2004-507703/48.

XX Example 1; SEQ ID NO 81; 40pp; English.

CC The present invention describes a polypeptide (I) comprising in order

CC from the N-terminus to the C-terminus: (a) a prodomain comprising at

CC least 6 contiguous amino acids of the 15 amino acid sequence of SEQ ID

CC NO:3 (ADP83877, comprising residues 22-37 of SEQ ID NO:1 (ADP83876) which

CC is the longest isoform of human beta-site amyloid precursor protein (APP)

CC cleaving enzyme 1 (BACE1), (b) an engineered cleavage site;

CC and (c) a protease domain. (I) is capable of being cleaved at the

CC engineered cleavage site, and so releases a free protease domain that has

CC BACE1 activity. Also described: (1) a nucleic acid sequence encoding (I);

CC (2) a vector for expression of (I); and (3) a host cell expressing (I).

CC (1) has neuroprotective and nootropic activities, and can be used in gene  
CC therapy. (1) can be used for producing preparations of homogenously  
CC processed BACE that may be used for e.g. studying or treating diseases  
CC such as Alzheimer's disease or Down's syndrome. The human BACE1 gene is  
CC located on chromosome 11, more specifically to 11q23.2-23.3. The present  
CC sequence represents a mutant human BACE1 amino acid sequence, which is  
CC used in an example from the present invention.

XX  
SQ Sequence 433 AA;

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLSRGCGAPLGL 41  
|||  
Db 1 TQHGIRLPRLSRGCGAPLGL 20

RESULT 22

ADP83951  
ID ADP83951 standard; protein; 433 AA.

XX ADP83951;

XX 23-SEP-2004 (first entry)

DE Human BACE1 mutant amino acid sequence SEQ ID NO:78.

XX human; beta-site amyloid precursor protein cleaving enzyme 1;

KM beta-site APP cleaving enzyme 1; BACE1; BACE1 isoform A; chromosome 11;

KM prodomain; engineered cleavage site; protease domain; neuroprotective;

KM nootropic; gene therapy; Alzheimer's disease; Down's syndrome; mutant.

XX Homo sapiens.

OS Synthetic.

XX WO2004056962-A2.

PN 08-JUL-2004.

XX 02-DEC-2003; 2003WO-US038314.

XX 04-DEC-2002; 2002US-0430984P.

PA (SUNNE-) SUNESIS PHARM INC.

XX Ballinger M;

XX WPI; 2004-507703/48.

PT New polypeptides for producing homogenously processed preparations of

PT beta site amyloid precursor protein-cleaving enzyme comprises a

PT prodomain, an engineered cleavage site and a protease domain.

XX Example 1; SEQ ID NO 78; 40pp; English.

CC The present invention describes a polypeptide (1) comprising in order  
CC from the N-terminus to the C-terminus: (a) a prodomain comprising at  
CC least 6 contiguous amino acids of the 16 amino acid sequence of SEQ ID  
CC NO:3 (ADP83877, comprising residues 22-37 of SEQ ID NO:1 (ADP83876) which  
CC is the longest isoform of human beta-site amyloid precursor protein (APP)  
CC cleaving enzyme 1 (BACE1), isoform A); (b) an engineered cleavage site;  
CC and (c) a protease domain. (1) is capable of being cleaved at the  
CC engineered cleavage site, and so releases a free protease domain that has  
CC BACE1 activity. Also described: (1) a nucleic acid sequence encoding (1);  
CC (2) a vector for expression of (1); and (3) a host cell expressing (1).  
CC (1) has neuroprotective and nootropic activities, and can be used in gene  
CC therapy. (1) can be used for producing preparations of homogenously  
CC processed BACE that may be used for e.g. studying or treating diseases  
CC such as Alzheimer's disease or Down's syndrome. The human BACE1 gene is  
CC located on chromosome 11, more specifically to 11q23.2-23.3. The present  
CC sequence represents a mutant human BACE1 amino acid sequence, which is

CC used in an example from the present invention.

XX  
SQ Sequence 433 AA;

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLSRGCGAPLGL 41  
|||  
Db 1 TQHGIRLPRLSRGCGAPLGL 20

RESULT 23

ADP83957  
ID ADP83957 standard; protein; 433 AA.

XX ADP83957;

XX 23-SEP-2004 (first entry)

DE Human BACE1 mutant amino acid sequence SEQ ID NO:84.

XX human; beta-site amyloid precursor protein cleaving enzyme 1;

KM beta-site APP cleaving enzyme 1; BACE1; BACE1 isoform A; chromosome 11;

KM prodomain; engineered cleavage site; protease domain; neuroprotective;

KM nootropic; gene therapy; Alzheimer's disease; Down's syndrome; mutant.

XX Homo sapiens.

OS Synthetic.

XX WO2004056962-A2.

PN 08-JUL-2004.

XX 02-DEC-2003; 2003WO-US038314.

XX 04-DEC-2002; 2002US-0430984P.

PA (SUNNE-) SUNESIS PHARM INC.

XX Ballinger M;

XX WPI; 2004-507703/48.

PT New polypeptides for producing homogenously processed preparations of

PT beta site amyloid precursor protein-cleaving enzyme comprises a

PT prodomain, an engineered cleavage site and a protease domain.

XX Example 1; SEQ ID NO 84; 40pp; English.

CC The present invention describes a polypeptide (1) comprising in order  
CC from the N-terminus to the C-terminus: (a) a prodomain comprising at  
CC least 6 contiguous amino acids of the 16 amino acid sequence of SEQ ID  
CC NO:3 (ADP83877, comprising residues 22-37 of SEQ ID NO:1 (ADP83876) which  
CC is the longest isoform of human beta-site amyloid precursor protein (APP)  
CC cleaving enzyme 1 (BACE1), isoform A); (b) an engineered cleavage site;  
CC and (c) a protease domain. (1) is capable of being cleaved at the  
CC engineered cleavage site, and so releases a free protease domain that has  
CC BACE1 activity. Also described: (1) a nucleic acid sequence encoding (1);  
CC (2) a vector for expression of (1); and (3) a host cell expressing (1).  
CC (1) has neuroprotective and nootropic activities, and can be used in gene  
CC therapy. (1) can be used for producing preparations of homogenously  
CC processed BACE that may be used for e.g. studying or treating diseases  
CC such as Alzheimer's disease or Down's syndrome. The human BACE1 gene is  
CC located on chromosome 11, more specifically to 11q23.2-23.3. The present  
CC sequence represents a mutant human BACE1 amino acid sequence, which is  
CC used in an example from the present invention.

XX  
SQ Sequence 433 AA;

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 33;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPKRSGLGAPLGL 41  
Db 1 TQHGIRLPKRSGLGAPLGL 20

RESULT 24  
ADR75347  
ID ADR75347 standard; protein; 433 AA.  
AC ADR75347;  
DT 18-NOV-2004 (first entry)  
DE Human-pro-Asp-2(a)deltatm mutant protein.  
KW Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;  
KM chromosome identification; Alzheimer's disease; human; mutant.  
XX  
XX  
XX Homo sapiens.  
OS Synthetic.  
OS US2004166507-A1.  
PN 26-AUG-2004.  
PD 29-AUG-2003; 2003US-00652045.  
PF 24-SEP-1998; 98US-0101594P.  
PR 23-SEP-1999; 99US-00404133.  
PR 23-SEP-1999; 99US-0155493P.  
PR 13-OCT-1999; 99US-00416901.  
XX  
XX (GURN/) GURNEY M E.  
PA (BIEN/) BIENKOWSKI M J.  
PA (HEIN/) HEINRIKSON R L.  
PA (PARO/) PARODI L A.  
PA (YANR/) YAN R.  
XX  
PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
XX  
XX WPI; 2004-624916/60.  
DR N-PSDB; ADR75346.  
XX  
XX Novel purified/isolated polynucleotide encoding polypeptide having  
PT aspartyl protease activity involved in processing amyloid precursor  
PT protein into amyloid beta, useful in identifying agent decreasing  
XX activity of aspartyl protease.  
XX  
XX Example 9; SEQ ID NO 26; 107pp; English.  
XX  
XX The invention relates to nucleic acid sequences encoding aspartyl  
CC protease (Asp) polypeptides having aspartyl protease activity involved in  
CC processing amyloid precursor protein (APP) into amyloid beta. The  
CC invention also relates to a method for identifying an agent that  
CC decreases the protease activity of the Asp. Asp DNA is useful in  
CC chromosome identification as they can hybridize with a specific location  
CC on a human chromosome and in identifying the relationship between genes  
CC and diseases (particular gene responsible for causing diseases). It is  
CC also useful for identifying candidates to modulate the progression of  
CC Alzheimer's disease. Asp is useful in raising antibodies that are useful  
CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The  
CC present sequence is the human-pro-Asp-2(a)deltatm mutant protein. This  
CC sequence is used to illustrate the method of the invention.  
XX  
XX Sequence 433 AA;

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPKRSGLGAPLGL 41

Db 2 TQHGIRLPKRSGLGAPLGL 21

RESULT 25  
AAU07220  
ID AAU07220 standard; protein; 434 AA.  
XX  
XX AC AAU07220;  
XX  
XX DT 24-OCT-2001 (first entry)  
XX  
XX DE Human aspartyl protease 2b deltatm (His)6.  
XX  
XX KW Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;  
KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;  
XX beta-secretase; Alzheimer's disease.  
XX  
XX OS Homo sapiens.  
XX  
XX FH Key Location/Qualifiers  
FH Misc-difference 429 /note= "Encoded by cag"  
FT /note= "Encoded by cag"  
FT Misc-difference 430 /note= "Encoded by cag"  
FT Misc-difference 431 /note= "Encoded by cag"  
FT Misc-difference 432 /note= "Encoded by cag"  
FT Misc-difference 433 /note= "Encoded by cag"  
FT Misc-difference 434 /note= "Encoded by cag"  
FT /note= "Encoded by cag"  
XX  
XX WO200149097-A2.  
XX  
XX PD 12-JUL-2001.  
XX  
XX PF 09-MAY-2001; 2001WO-1B000797.  
XX  
XX PR 09-MAY-2001; 2001WO-1B000797.  
XX  
XX PA (BIEN/) BIENKOWSKI M J.  
PA (GURN/) GURNEY M E.  
PA (HEIN/) HEINRIKSON R L.  
PA (PARO/) PARODI L A.  
PA (YANR/) YAN R.  
XX  
XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
XX  
XX WPI; 2001-502548/55.  
DR N-PSDB; AAS11733.  
XX  
XX Novel purified polypeptide comprising fragment of mammalian aspartyl  
PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
XX activity.  
XX  
XX Disclosure; Page 169-170; 185pp; English.  
XX  
XX The invention relates to a novel purified polypeptide comprising a  
CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
CC and the fragment retain the beta-secretase activity of the mammalian Asp2  
CC protein. Also included is an isoform of amyloid protein precursor (APP)  
CC comprising the amino acid sequence of a APP or its fragment containing an  
CC APP cleavage site recognizable by a mammalian beta-secretase, and further  
CC comprising two lysine residues at the carboxyl terminus of the amino acid  
CC sequence of the mammalian APP or APP fragment. The polypeptides are used  
CC for assaying for modulators of beta-secretase activity; identifying  
CC agents that inhibit the APP processing activity of human Asp2 aspartyl  
CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2  
CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.



CC inhibitors and modulators of human Asp2 activity. The invention relates  
CC to a method for identifying agents that modulate the activity of human  
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
CC as a means to screen in cellular assays for the inhibitors of beta- and  
CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in  
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
CC APP nucleic acids in in vitro assays and in Northern and Southern Blots.  
CC The present sequence is in human aspartyl protease 2b (Hu-Asp2b) deltaTM  
CC (His)6 protein which is obtained by the deletion of C-terminal  
CC transmembrane domain and addition of a hexa-histidine tag at the C-  
CC terminal end of Hu-Asp2b. Human Asp2b has beta-secretase activity  
XX  
SQ Sequence 434 AA;  
  
Query Match 100.0%; Score 104; DB 1; Length 434;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
QY 22 TQHGIRLPKRSGLGAPLGL 41  
DB 22 TQHGIRLPKRSGLGAPLGL 41  
  
RESULT 28  
AAE02599  
ID AAE02599 standard; protein; 434 AA.  
AC AAE02599;  
XX  
XX 10-AUG-2001 (first entry)  
DT  
XX  
XX Human aspartyl protease 2 (b) delta TM (His)6 protein.  
DE  
XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;  
XX Alzheimer's disease; antialzheimer's; aspartyl protease 2; Asp 2;  
KW beta-secretase; chromosome 11q23.3-24.1; mutant; mutcin.  
XX  
XX Homo sapiens.  
OS Synthetic.  
OS  
XX  
XX Key Location/Qualifiers  
FH Misc-difference 429  
FT /note= "Encoded by CAG"  
FT Misc-difference 430  
FT /note= "Encoded by CAG"  
FT Misc-difference 431  
FT /note= "Encoded by CAG"  
FT Misc-difference 432  
FT /note= "Encoded by CAG"  
FT Misc-difference 433  
FT /note= "Encoded by CAG"  
FT Misc-difference 434  
FT /note= "Encoded by CAG"  
FT Misc-difference 434  
FT /note= "Encoded by CAG"  
XX  
XX WO200123533-A2.  
XX  
XX 05-APR-2001.  
XX  
XX 22-SEP-2000; 2000WO-US026080.  
XX  
XX 23-SEP-1999; 99US-0155493P.  
XX 23-SEP-1999; 99WO-US020881.  
XX 13-OCT-1999; 99US-00416901.  
XX 06-DEC-1999; 99US-0169232P.  
XX  
XX (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
XX Gurney M, Bienkowski MJ;  
XX  
XX WPI; 2001-290516/30.  
XX  
XX N-PSDB; AAD06769.  
XX  
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor

PT protein, useful for the treatment of Alzheimer's disease.  
XX  
XX Example 10; Page 168-169; 183pp; English.  
PS  
XX  
XX The present invention relates to enzymes for cleaving the alpha-  
CC secretase site of the amyloid precursor protein (APP) and methods of  
CC identifying those enzymes. The methods may be used to identify enzymes  
CC that may be used to cleave the alpha-secretase cleavage site of the APP  
CC protein. The enzymes may be used to treat or modulate the progress of  
CC Alzheimer's disease. The present sequence is human aspartyl protease 2  
CC (Asp 2) (b) delta TM (His)6 protein. Asp 2 has beta-secretase protease  
CC activity  
XX  
SQ Sequence 434 AA;  
  
Query Match 100.0%; Score 104; DB 1; Length 434;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
QY 22 TQHGIRLPKRSGLGAPLGL 41  
DB 22 TQHGIRLPKRSGLGAPLGL 41  
  
RESULT 29  
AAU06621  
ID AAU06621 standard; protein; 434 AA.  
AC AAU06621;  
XX  
XX 24-OCT-2001 (first entry)  
DT  
XX  
XX Human-pro-Asp 2(b) delta TM (His)6.  
DE  
XX Human; Aspartyl protease; beta-secretase; neurotropic; Asp2;  
XX neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;  
KW amyloid-beta; Abeta; Human-pro-Asp 2(b) delta TM (His)6; mutant; mutcin.  
XX  
XX Homo sapiens.  
OS Synthetic.  
OS  
XX  
XX Key Location/Qualifiers  
FH Misc-difference 429  
FT /note= "Encoded by CAGCAGCAGCAGCAG"  
FT Region 429..434  
FT /label= His\_tag  
FT /note= "Nickel binding region to aid purification"  
XX  
XX WO200149098-A2.  
XX  
XX 12-JUL-2001.  
XX  
XX 09-MAY-2001; 2001WO-IB000798.  
XX  
XX 09-MAY-2001; 2001WO-IB000798.  
XX  
XX 09-MAY-2001; 2001WO-IB000798.  
XX  
XX (BIEN/) BIENKOWSKI M J.  
XX (GURN/) GURNEY M E.  
XX (HEIN/) HEINRIKSON R L.  
XX (PARO/) PARODI L A.  
XX (VANR/) VAN R.  
XX  
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Van R;  
XX  
XX WPI; 2001-502549/55.  
XX  
XX N-PSDB; AAS11548.  
XX  
XX Novel purified polypeptide comprising fragment of mammalian aspartyl  
PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
PT activity.  
XX  
XX Claim 149; Page 169-170; 185pp; English.  
PS

XX The invention relates to a purified polypeptide comprising a fragment of  
CC mammalian aspartyl protease (Asp12) protein which lacks the Asp2  
CC transmembrane domain and the Asp2 protein, and where the polypeptide and  
CC the fragment retain the beta-secretase activity of the mammalian Asp2  
CC protein. The invention also details polynucleotides for the Asp proteins  
CC and vectors expressing them, and a polypeptide (isoform of amyloid  
CC protein precursor (APP)) comprising the amino acid sequence of an APP or  
CC its fragment containing an APP cleavage site recognizable by a mammalian  
CC beta-secretase, and further comprising two lysine residues at the  
CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP  
CC fragment. Also included in the invention are methods of identifying  
CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
CC useful for treating Alzheimer's disease. APP is useful in methods for  
CC identifying inhibitors or modulators of human Asp2 activity and amyloid-  
CC beta (A-beta) peptide production. APP is also useful in designing  
CC therapeutics for the treatment or prevention of Alzheimer's disease. APP  
CC comprising the APP-SW-beta-secretase peptide sequence (NMDA), which is  
CC associated with increased levels of A-beta processing is useful in assays  
CC relating to the Alzheimer's research. The expression vector is useful for  
CC recombinantly expressing APP. Nucleic acids that hybridise to Asp  
CC oligonucleotides are useful as probes or primers. The probes are useful  
CC for detecting hu-Asp nucleic acids in *in vitro* assays and in Northern and  
CC Southern blots. The present sequence is Human-pro- Asp 2(b) delta TM  
CC (His)6 protein, which lacks the C-terminal transmembrane domain and has a  
CC His tag to aid purification

SQ Sequence 434 AA;

Query Match 100.0%; Score 104; DB 1; Length 434;

Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPRLSGGAPLGL 41  
|||  
DB 22 TONGIRLPRLSGGAPLGL 41

RESULT 30

ABB78608 standard; protein; 434 AA.

AC ABB78608;

DT 16-JUL-2002 (first entry)

DE Human Asp-2(b)deltaTM(His)6 protein sequence SEQ ID NO:53.

KM Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;  
KW Chromosome 11q23.3-24.1.

OS Homo sapiens.

XX Key Location/Qualifiers

FT MISC-difference 429 /note= "encoded by CAG"

FT MISC-difference 430 /note= "encoded by CAG"

FT MISC-difference 431 /note= "encoded by CAG"

FT MISC-difference 432 /note= "encoded by CAG"

FT MISC-difference 433 /note= "encoded by CAG"

FT MISC-difference 434 /note= "encoded by CAG"

PN GB2367060-A.

PD 27-MAR-2002.

PF 29-OCT-2001; 2001GB-00025934.

XX

PR 23-SEP-1999; 99US-00404133.  
PR 23-SEP-1999; 99US-0155493P.  
PR 23-SEP-1999; 99WD-US020881.  
PR 13-OCT-1999; 99US-00416901.  
PR 06-DEC-1999; 99US-0169232P.  
PR 22-SEP-2000; 2000GB-00023315.  
XX (PDBA ) PHARMACIA & UPJOHN CO.  
PA  
XX  
XX Blenkowekki MJ, Gurney M;  
PI WPI; 2002-397167/43.  
DR N-PSDB; ABL52488.  
XX

Example 10; Page 140-141; 182pp; English.

CC The present invention describes a human aspartyl protease 1 (hu-Asp1)  
CC substrate (I) which comprises a peptide of no more than 50 amino acids,  
CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
CC (1) under acidic conditions; and (b) determining the level of hu-Asp1  
CC proteolytic activity; (2) a purified polynucleotide (III) comprising a  
CC nucleotide sequence that hybridises under stringent conditions to the non-  
CC coding strand complementary to a defined 1804 nucleotide sequence (see  
CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1  
CC proteolytic activity and lacks nucleotides encoding a transmembrane  
CC domain; (3) a purified polynucleotide (III') comprising a sequence that  
CC hybridises under stringent conditions to (III) (the nucleotide sequence  
CC encodes a polypeptide further lacking a pro-peptide domain corresponding  
CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)  
CC comprising (III) or (III') and (5) a host cell (V) transformed or  
CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease  
CC substrate (I) may be used as an enzyme substrate in assays to detect  
CC aspartyl protease activity, (II) and therefore diagnose diseases  
CC associated with aberrant hu-Asp1 expression and activity such as  
CC Alzheimer's disease. hu-Asp1 has been localised to chromosome 21, while  
CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
CC sequence represents human Asp-2(b)deltaTM(His)6, which is given in an  
CC example from the present invention

SQ Sequence 434 AA;

Query Match 100.0%; Score 104; DB 1; Length 434;

Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPRLSGGAPLGL 41  
|||  
DB 22 TONGIRLPRLSGGAPLGL 41

RESULT 31

ADJ94365 standard; protein; 434 AA.

AC ADJ94365;

DT 03-JUN-2004 (first entry)

DE Human-pro-Asp-2(b)deltaTM(His)6.

KM Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);  
KW beta secretase; amyloid protein precursor; APP; Alzheimer's disease;  
PR neurotropic; neuroprotective; amyloid beta; mutant; mutein.

OS Homo sapiens.

OS Synthetic.

XX US6706485-B1.

PN



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XX 16-MAR-2004.
PD
XX
PF 12-APR-2000; 2000US-00548376.
XX
PR 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99MO-US020881.
PR 13-OCT-1999; 99US-00416901.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
XX
XX WPI; 2004-236722/22.
XX N-PSDB; AD034364.
XX
XX Identifying agents that modulate activity of Asp2 aspartyl protease
XX useful for treating or preventing Alzheimer's disease involves comparing
XX APP processing activity of protease in presence and absence of test
XX agent.
XX
XX Example 10; SEQ ID NO 53; 109bp; English.
XX
XX The invention relates to identifying agents that modulate activity of
XX Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,
XX encoded by ID 5) aspartyl protease. Involves contacting Asp2 with amyloid
XX precursor protein (APP) in the presence and absence of a test agent,
XX where Asp2 is a recombinant polypeptide and processes APP into amyloid
XX beta, determining APP processing activity of Asp2 in presence and absence
XX of the test agent, and comparing the activities to identify agents that
XX modulate the activity of Asp2. Also disclosed are the cDNA and proteins
XX for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the
XX nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising
XX the vector and the method of producing Hu-Asp polypeptide, an isolated
XX antibody that specifically binds to Hu-Asp polypeptide, an isolated
XX cell that can be used to screen for inhibitors of beta secretase
XX activity, novel isoforms of amyloid protein precursor (APP), where the
XX last 2 carboxy terminus amino acids of that isoform are both lysine
XX residues (e.g. those designated APP695-KK or carrying the Swedish
XX mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW
XX or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful
XX for assaying for beta secretase activity and screening for inhibitors of
XX beta-secretase) and polynucleotides that encode the APP proteins. The
XX method is useful for identifying agents that modulate the activity
XX (amyloid precursor protein processing activity) of Asp2 aspartyl
XX protease. Preferably, the method is useful for identifying agents that
XX inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
XX precursor protein processing, are useful for treating or preventing
XX Alzheimer's disease. The present sequence represents an aspartyl protease
XX mutant construct (e.g. lacking a transmembrane domain and/or including a
XX caspase cleavage site) used to investigate the cleavage activity of Asp2
XX proteins.
XX
XX Sequence 434 AA;
SQ
Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGIGCAPLGL 41
DB 22 TQHGIRLPRLRSGIGCAPLGL 41
RESULT 32
AD050461 standard; protein; 434 AA.
XX
AC AD050461;
XX
DT 29-JUL-2004 (first entry)

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```

XX DE Human Asp2 (b) deltatm(His) 6 protein.
XX
XX Asparyl protease; Asp; beta secretase; amyloid precursor protein; APP;
XX Alzheimer's disease; gene therapy; human.
XX
XX Homo sapiens.
XX Synthetic.
XX
XX Key Location/Qualifiers
XX FT Misc-difference 429 /note= "Encoded by CAG"
XX FT Misc-difference 430 /note= "Encoded by CAG"
XX FT Misc-difference 431 /note= "Encoded by CAG"
XX FT Misc-difference 432 /note= "Encoded by CAG"
XX FT Misc-difference 433 /note= "Encoded by CAG"
XX FT Misc-difference 434 /note= "Encoded by CAG"
XX FT Misc-difference 434 /note= "Encoded by CAG"
XX
XX U66737510-B1.
XX
XX 18-MAY-2004.
XX
XX 12-APR-2000; 2000US-00548373.
XX
XX 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99MO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
XX
XX WPI; 2004-387112/36.
XX N-PSDB; AD050460.
XX
XX New Asp2 aspartyl protease protein comprising tripeptides DNG and DSG
XX involved in processing amyloid precursor protein into amyloid beta,
XX useful in preparing a composition for treating or preventing Alzheimer's
XX disease.
XX
XX Example 10; SEQ ID NO 53; 108bp; English.
XX
XX The invention relates to a method for identifying an agent that decreases
XX the protease activity of the aspartyl protease (Asp) polypeptide. It also
XX provides enzyme and enzymatic procedures for cleaving the beta secretase
XX cleavage site of the amyloid precursor protein (APP). The invention is
XX useful in preparing a composition for treating or preventing Alzheimer's
XX disease. It is also useful in gene therapy. The present sequence is human
XX Asp2(b)deltatm(His) 6 protein. This sequence is used to illustrate the
XX method of the invention.
XX
XX Sequence 434 AA;
SQ
Query Match 100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGIGCAPLGL 41
DB 22 TQHGIRLPRLRSGIGCAPLGL 41
RESULT 33
ADR75374 standard; protein; 434 AA.
XX
AD75374
XX

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AC ADR75374; (first entry)  
 DT 18-NOV-2004  
 DE Human Asp2(b)deltaTM(His)6 protein.  
 XX  
 KM Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;  
 KM chromosome identification; Alzheimer's disease; human.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 FH Key location/Qualifiers  
 FT Misc-difference 429  
 FT Misc-difference /note= "Encoded by CAG"  
 FT Misc-difference 430  
 FT Misc-difference /note= "Encoded by CAG"  
 FT Misc-difference 431  
 FT Misc-difference /note= "Encoded by CAG"  
 FT Misc-difference 432  
 FT Misc-difference /note= "Encoded by CAG"  
 FT Misc-difference 433  
 FT Misc-difference /note= "Encoded by CAG"  
 FT Misc-difference 434  
 FT Misc-difference /note= "Encoded by CAG"  
 XX  
 PN US2004166507-A1.  
 XX  
 PD 26-AUG-2004.  
 XX  
 PD 29-AUG-2003; 2003US-00652045.  
 XX  
 PR 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 13-OCT-1999; 99US-00416901.  
 XX  
 PA (GURN/) GURNEY M E.  
 PA (BIEN/) BIENKOWAKI M J.  
 PA (HEIN/) HEINRIKSON R L.  
 PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.  
 XX  
 PI Gurney ME, Bienkowiaki MJ, Heinrikson RL, Parodi LA, Yan R;  
 DR WPI; 2004-624916/60.  
 XX  
 DR N-PSDB; ADR75373.  
 XX  
 PT Novel purified/isolated polynucleotide encoding polypeptide having  
 PT aspartyl protease activity involved in processing amyloid precursor  
 PT protein into amyloid beta, useful in identifying agent decreasing  
 PT activity of aspartyl protease.  
 XX  
 PS Example 10; SEQ ID NO 53; 1077P; English.  
 XX  
 XX The invention relates to nucleic acid sequences encoding aspartyl  
 CC protease (Asp) polypeptides having aspartyl protease activity involved in  
 CC processing amyloid precursor protein (APP) into amyloid beta. The  
 CC invention also relates to a method for identifying an agent that  
 CC decreases the protease activity of the Asp. Asp DNA is useful in  
 CC chromosome identification as they can hybridize with a specific location  
 CC on a human chromosome and in identifying the relationship between genes  
 CC and diseases (particular gene responsible for causing diseases). It is  
 CC also useful for identifying candidates to modulate the progression of  
 CC Alzheimer's disease. Asp is useful in raising antibodies that are useful  
 CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The  
 CC present sequence is the human Asp2(b)deltaTM(His)6 protein. This sequence  
 CC is used to illustrate the method of the invention.  
 XX  
 SQ Sequence 434 AA;  
 Query Match 100.0%; Score 104; DB 1; Length 434;  
 Best Local Similarity 100.0%; Pred. No. 33;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 22 TQHGIRLPRLSGGAPLGL 41  
 DB 22 TQHGIRLPRLSGGAPLGL 41  
 RESULT 34  
 ID ADI64641 standard; protein; 435 AA.  
 AC ADI64641;  
 DT 22-APR-2004 (first entry)  
 DE Mature human pro-beta-secretase (pro-BACE) protein seq id 2.  
 XX  
 KW crystal; glycosylated human beta-secretase; BACE; human beta-secretase;  
 KW protein co-ordinate data; pro-BACE.  
 XX  
 OS Homo sapiens.  
 PN US2004014194-A1.  
 PD 22-JAN-2004.  
 PP 26-MAR-2003; 2003US-00400273.  
 PR 27-MAR-2002; 2002US-0367937P.  
 PA (SCHE ) SCHERING CORP.  
 PI Beyer BM, Hammond GS, Reichert P, Strickland C, Wang W, Weber PC;  
 PI Wong GT, Zhang L;  
 DR WPI; 2004-167920/16.  
 XX  
 PT New crystal comprising a glycosylated, human beta-secretase polypeptide,  
 PT useful for determining the three-dimensional structure of beta-secretase  
 PT and other related proteins.  
 XX  
 PS Claim 15; SEQ ID NO 2; 1077P; English.  
 XX  
 CC The invention describes a crystal comprising a glycosylated, human beta-  
 CC secretase polypeptide characterised by structural coordinates comprising  
 CC a root mean square deviation of conserved residue backbone atoms of less  
 CC than 1.5 Angstrom when superimposed on backbone atoms described by  
 CC structural coordinates. The crystal is useful for determining the three-  
 CC dimensional structure of beta-secretase and other related proteins. This  
 CC is the amino acid sequence of human beta-secretase (BACE) protein.  
 XX  
 SQ Sequence 435 AA;  
 Query Match 100.0%; Score 104; DB 1; Length 435;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 22 TQHGIRLPRLSGGAPLGL 41  
 DB 1 TQHGIRLPRLSGGAPLGL 20  
 RESULT 35  
 ID ADP83949 standard; protein; 439 AA.  
 AC ADP83949;  
 DT 23-SEP-2004 (first entry)  
 DE Human BACE1 mutant amino acid sequence SEQ ID NO.76.  
 XX  
 KW human; beta-site amyloid precursor protein cleaving enzyme 1;

KM beta-site APP cleaving enzyme 1; BACE1; BACE1 isoform A; chromosome 11;  
 KM prodomain; engineered cleavage site; protease domain; neuroprotective;  
 KM neurotropic; gene therapy; Alzheimer's disease; Down's syndrome; mutant.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 PN WO2004056962-A2.  
 XX  
 PD 08-JUL-2004.  
 XX  
 PF 02-DEC-2003; 2003WO-US038314.  
 XX  
 PR 04-DEC-2002; 2002US-0430984P.  
 XX  
 PA (SUNE-) SUNESIS PHARM INC.  
 XX  
 PI Ballinger M;  
 XX  
 DR WPI; 2004-507703/48.  
 XX  
 PT New polypeptides for producing homogeneously processed preparations of  
 PT beta site amyloid precursor protein-cleaving enzyme comprises a  
 PT prodomain, an engineered cleavage site and a protease domain.  
 XX  
 PS Example 1; SEQ ID NO 76; 40pp; English.  
 XX  
 CC The present invention describes a polypeptide (1) comprising in order  
 CC from the N-terminus to the C-terminus: (a) a prodomain comprising at  
 CC least 6 contiguous amino acids of the 15 amino acid sequence of SEQ ID  
 CC NO:3 (ADP83877), comprising residues 22-37 of SEQ ID NO:1 (ADP83876) which  
 CC is the longest isoform of human beta-site amyloid precursor protein (APP)  
 CC cleaving enzyme 1 (BACE1), isoform A; (b) an engineered cleavage site;  
 CC and (c) a protease domain. (1) is capable of being cleaved at the  
 CC engineered cleavage site, and so releases a free protease domain that has  
 CC BACE1 activity. Also described: (1) a nucleic acid sequence encoding (1);  
 CC (2) a vector for expression of (1); and (3) a host cell expressing (1).  
 CC (1) has neuroprotective and neurotropic activities, and can be used in gene  
 CC therapy. (1) can be used for producing preparations of homogeneously  
 CC processed BACE that may be used for e.g. studying or treating diseases  
 CC such as Alzheimer's disease or Down's syndrome. The human BACE1 gene is  
 CC located on chromosome 11, more specifically to 11q23.2-23.3. The present  
 CC sequence represents a mutant human BACE1 amino acid sequence, which is  
 CC used in an example from the present invention.  
 CC  
 SQ Sequence 439 AA;  
 Query Match 100.0%; Score 104; DB 1; Length 439;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 Oy 22 TQHGIRLPRLRSGLGAPLGL 41  
 Db 1 TQHGIRLPRLRSGLGAPLGL 20

RESULT 36  
 ID AAY88431 standard; protein; 446 AA.  
 AC AAY88431;  
 XX  
 DT 12-SEP-2003 (revised)  
 DT 06-AUG-2003 (revised)  
 DT 03-AUG-2000 (first entry)  
 XX  
 DE T7-caspase-human-pro-Asp-2(a)-deltaTM amino acid sequence.  
 XX  
 KM Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;  
 KM Alzheimer's disease; beta secretase site;  
 KM T7-caspase-human-pro-Asp-2(a)-deltaTM.  
 XX  
 OS Homo sapiens.

OS Enterobacteria phage T7.  
 OS Chimeric.  
 XX  
 PN WO200017369-A2.  
 XX  
 PD 30-MAR-2000.  
 XX  
 PF 23-SEP-1999; 99WO-US020881.  
 XX  
 PR 24-SEP-1998; 98US-0101594P.  
 XX  
 PA (PHAA) PHARMACIA & UPJOHN CO.  
 XX  
 PL Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
 XX  
 DR WPI; 2000-303209/26.  
 DR N-PSDB; AAA15668.  
 XX  
 PT New enzyme designated human aspartase useful in research into Alzheimer's  
 PT Disease is capable of cleaving amyloid protein precursor at the beta  
 PT secretase site to produce amyloid beta peptide.  
 XX  
 PS Example 9; Fig 6; 183pp; English.  
 XX  
 CC This sequence represents a modified version of the human aspartase 2  
 CC (Asp2) amino acid sequence. The sequence is used in the bacterial  
 CC expression of human Asp2. The invention relates to a protease (e.g.  
 CC Asp2) capable of cleaving the beta secretase site of amyloid precursor  
 CC protein (APP). The protease contains a sequence encoding the amino acid  
 CC sequence DTG and a sequence encoding DSG or DTG separated by 100-300  
 CC amino acids. When mutated the APP gene causes an autosomal dominant form  
 CC of Alzheimer's disease. APP localises to the cell surface membrane and  
 CC have a single C-terminal transmembrane domain. Proteolytic processing of  
 CC APP produces the amyloid beta protein, which is possibly very important  
 CC in Alzheimer's disease. The invention includes a nucleotide sequence  
 CC encoding the protease, a vector containing the nucleotide sequence, and a  
 CC cell line comprising the vector. Methods for screening for inhibitors of  
 CC aspartase protein and nucleotide sequences and the methods for  
 CC identifying inhibitors of the protease, are useful in the treatment of  
 CC and research in to Alzheimer's disease. (Updated on 06-AUG-2003 to  
 CC correct OS field.) (Updated on 12-SEP-2003 to standardise OS field)  
 CC  
 SQ Sequence 446 AA;  
 Query Match 100.0%; Score 104; DB 1; Length 446;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 Oy 22 TQHGIRLPRLRSGLGAPLGL 41  
 Db 15 TQHGIRLPRLRSGLGAPLGL 34

RESULT 37  
 ID AAU07211 standard; protein; 446 AA.  
 AC AAU07211;  
 XX  
 DT 11-SEP-2003 (revised)  
 DT 24-OCT-2001 (first entry)  
 XX  
 DE T7-human aspartyl protease 2a deltaTM (T7huAsp-2adeltaTM).  
 XX  
 KM Human; aspartyl protease 1; Asp-1; neurotropic; neuroprotective;  
 KM Aspartyl protease 2; Asp2; amyloid protein precursor; APP;  
 KM beta-secretase; Alzheimer's disease; T7huAsp-2adeltaTM.  
 XX  
 OS Homo sapiens.  
 OS Enterobacteria phage T7.  
 XX  
 FH Key Location/Qualifiers

```

FT Peptide 1..14
PT /note= "Signal peptide"
FT Protein 15..446
PT /note= "Mature T7-human aspartyl protease 2a deltatm"
XX
XX MO200149097-A2.
XX
XX 12-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000797.
XX
XX 09-MAY-2001; 2001WO-IB000797.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURNEY/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARODI/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-502548/55.
XX N-PSDB; AAS11711.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 9; Fig 6; 185pp; English.
XX
XX The invention relates to a novel purified polypeptide comprising a
XX fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
XX Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
XX and the fragment retain the beta-secretase activity of the mammalian Asp2
XX protein. Also included is an isoform of amyloid protein precursor (APP)
XX comprising the amino acid sequence of a APP or its fragment containing an
XX APP cleavage site recognizable by a mammalian beta-secretase, and further
XX comprising two lysine residues at the carboxyl terminus of the amino acid
XX sequence of the mammalian APP or APP fragment. The polypeptides are used
XX for assaying for modulators of beta-secretase activity; identifying
XX agents that inhibit the APP processing activity of human Asp2 aspartyl
XX protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
XX; and for reducing cellular production of amyloid beta (Abeta) from APP.
XX Agents identified by the above methods are useful for treating
XX Alzheimer's disease; and for identifying modulators of amyloid-beta
XX (Abeta) peptide production, for use in designing therapeutics for the
XX treatment or prevention of Alzheimer's disease. Probes and primers
XX derived from Asp nucleic acid sequences are useful for detecting hu-Asp
XX nucleic acids in in vitro assays and in Northern and Southern blots. The
XX present sequence represents the amino acid sequence of T7-human Asp-2a
XX delta TM which has a T7 tag and lacks the transmembrane domain. This
XX construct was used for bacterial expression and purification of human
XX Asp2a. (Updated on 11-SEP-2003 to standardise OS field)
XX
XX Sequence 446 AA:
SQ
Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPNLSGLGAPLGL 41
DB 15 TQHGIRLPNLSGLGAPLGL 34

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```

XX
XX T7-Human-pro-Asp 2(a) protein lacking TM domain.
XX
XX Human; aspartyl protease 1; Asp1; amyloid precursor protein; APP;
XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
XX amyloid plaque; neuronal loss; proteolytic; neuroprotective;
XX T7-Human-pro-Asp 2(a) protein.
XX
XX Homo sapiens.
XX Synthetic.
XX
XX GB2357767-A.
XX
XX 04-JUL-2001.
XX
XX 22-SEP-2000; 2000GB-00023315.
XX
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Bienkowski MJ, Gurney M;
XX WPI; 2001-444208/48.
XX N-PSDB; AAD17874.
XX
XX Polypeptide comprising fragments of human aspartyl protease with amyloid
XX precursor protein processing activity and alpha-secretase activity, for
XX identifying modulators useful in treating Alzheimer's disease.
XX
XX Example 9; Fig 6; 187pp; English.
XX
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX proteins which lack transmembrane domain or amino terminal domain or
XX cytoplasmic domain and retains alpha-secretase activity and amyloid
XX protein precursor (APP) processing activity. The proteins of the
XX invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX activity, where modulators that increase hu-Asp1 alpha-secretase activity
XX are useful for treating Alzheimer's disease (AD) which causes progressive
XX dementia with consequent formation of amyloid plaques, neurofibrillary
XX tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
XX with the substrate under acidic conditions and determining the level of
XX hu-Asp1 proteolytic activity. The present sequence T7-human-pro-Asp 2(a)
XX protein lacking a transmembrane (TM) domain. This sequence is generated
XX from human Asp 2(a) protein by the addition of a T7 tag at its N-terminal
XX end and the deletion of its C-terminal TM domain
XX
XX Sequence 446 AA:
SQ
Query Match 100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPNLSGLGAPLGL 41
DB 15 TQHGIRLPNLSGLGAPLGL 34

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RESULT 38
AAE10638
ID AAE10638 standard; protein; 446 AA.
XX
XX AAE10638;
XX
XX 10-DEC-2001 (first entry)
DT

```

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RESULT 39
AAE06868
ID AAE06868 standard; protein; 446 AA.
XX
XX AAE06868;
XX
XX 23-OCT-2001 (first entry)
DT
XX
XX T7-Human-pro-Asp2(a) deltatm protein.
DE

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```

XX Human: aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP,
KM beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KM neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
KM neuroprotective; antisense therapy; gene therapy;
XX pro-Asp2(a) deltatm protein.
XX Homo sapiens.
OS Synthetic.
XX
XX MO200150829-A2.
XX
XX 19-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-1B000799.
XX
XX 09-MAY-2001; 2001WO-1B000799.
XX
XX 09-MAY-2001; 2001WO-1B000799.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURNEY/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-483072/52.
XX N-PSDB; AAD13030.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 9; Fig 6; 185pp; English.
XX
XX The invention relates to human aspartyl proteases (hu-Asp), beta-amyloid
XX precursor protein (APP) isoforms and their corresponding DNA molecules.
XX Human aspartyl proteases can act as beta-secretase proteases useful for
XX treating Alzheimer's disease. APP isoforms are useful for identifying
XX modulators of amyloid-beta peptide production, for use in designing
XX therapeutics for the treatment and prevention of Alzheimer's disease,
XX dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX and neuronal loss. APP isoforms are also used in methods for identifying
XX inhibitors and modulators of human Asp2 activity. The invention relates
XX to a method for identifying agents that modulate the activity of human
XX aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX as a means to screen in cellular assays for the inhibitors of beta- and
XX gamma-secretase. Hu-APP DNA fragments are useful as probes or primers in
XX polymerase chain reactions (PCR). The probes are useful for detecting hu-
XX APP nucleic acids in in vitro assays and in Northern and Southern blots.
XX The present sequence is T7-Human-pro-aspartyl protease 2a (Asp2a) deltatm
XX protein which is obtained by the addition of T7 tag at the N-terminal
XX end and deletion of the transmembrane domain. Human Asp2a has beta-
XX secretase activity
XX
XX Sequence 446 AA;
XX
XX Query Match 100.0%; Score 104; DB 1; Length 446;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 22 TOHGIRLPLRSGLGAPLGL 41
XX 15 TOHGIRLPLRSGLGAPLGL 34
XX
XX RESULT 40
XX AAE02590
XX ID AAE02590 standard; protein; 446 AA.
XX AC AAE02590;
XX

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DT 10-AUG-2001 (first entry)
XX
XX T7-Human-pro-Asp-2(a) delta TM protein..
DE
XX
XX Human: alpha-secretase; amyloid precursor protein; APP; therapy;
KM Alzheimer's disease; antiAlzheimer's; aspartyl protease 2a; Asp2a;
KM beta-secretase; Asp-2a delta TM.
XX
XX Homo sapiens.
OS Synthetic.
XX
XX MO200123533-A2.
XX
XX 05-APR-2001.
XX
XX 22-SEP-2000; 2000WO-US026080.
XX
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00418901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney M, Bienkowski MJ;
XX WPI; 2001-290516/30.
XX N-PSDB; AAD06748.
XX
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX protein, useful for the treatment of Alzheimer's disease.
XX
XX Example 9; Fig 6; 189pp; English.
XX
XX The present invention relates to enzymes for cleaving the alpha-
XX secretase site of the amyloid precursor protein (APP) and methods of
XX identifying those enzymes. The methods may be used to identify enzymes
XX that may be used to cleave the alpha-secretase cleavage site of the APP
XX protein. The enzymes may be used to treat or modulate the progress of
XX Alzheimer's disease. The present sequence is human T7 Aspartyl protease
XX 2a (Asp 2a) deltatm protein which is obtained by deleting the
XX transmembrane domain and adding a T7 tag at the N-terminal end. This
XX sequence has beta-secretase protease activity
XX
XX Sequence 446 AA;
XX
XX Query Match 100.0%; Score 104; DB 1; Length 446;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 22 TOHGIRLPLRSGLGAPLGL 41
XX 15 TOHGIRLPLRSGLGAPLGL 34
XX
XX RESULT 41
XX AAU06612
XX ID AAU06612 standard; protein; 446 AA.
XX AC AAU06612;
XX
XX 24-OCT-2001 (first entry)
XX
XX Human T7-Human-pro-Asp 2(a) delta TM fusion protein.
DE
XX
XX Human: Aspartyl protease; beta-secretase; nootropic; ASP2;
KM neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
KM amyloid-beta; Abeta; T7-Human-pro-Asp 2(a) delta TM.
XX
XX Homo sapiens.
OS Synthetic.
XX
XX Key Location/Qualifiers
XX

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XX  
DT 16-JUL-2002 (first entry)  
XX  
DE T7-human-pro-Asp-2(a)deltaTM protein sequence SEQ ID NO:22.  
XX  
KW Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;  
XX amyloid precursor protein; App.  
XX  
OS Homo sapiens.  
XX  
PN GB267060-A.  
XX  
PD 27-MAR-2002.  
XX  
PF 29-OCT-2001; 200IGB-00025934.  
XX  
PR 23-SEP-1999; 99US-00404133.  
XX PR 23-SEP-1999; 99US-0155493P.  
XX PR 23-SEP-1999; 99WO-US020801.  
XX PR 13-OCT-1999; 99US-00416901.  
XX PR 06-DEC-1999; 99US-0169232P.  
XX PR 22-SEP-2000; 2000GB-00023315.  
XX  
PA (PHRA ) PHARMACTA & UPJOHN CO.  
XX  
PI Bienkowski MJ, Gurney M;  
XX MPI: 2002-397167/43.  
XX DR N-PDB: ABL52466.  
XX  
PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
PT protease activity, e.g. for the diagnosis of Alzheimer's disease.  
PS Example 9; Fig 6; 182pp; English.

The present invention describes a human aspartyl protease 1 (hu-Asp1) substrate (I) which comprises a peptide of no more than 50 amino acids, and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1 proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with (1) under acidic conditions; and (b) determining the level of hu-Asp1 proteolytic activity; (2) a purified polynucleotide (III) comprising a nucleotide sequence that hybridises under stringent conditions to a non-coding strand complementary to a defined 1804 nucleotide sequence (see ABI52456) where the nucleotide sequence encodes a polypeptide having Asp1 proteolytic activity and lacks nucleotides encoding a transmembrane domain); (3) a purified polynucleotide (II') comprising a sequence that hybridises under stringent conditions to (III) (the nucleotide sequence encodes a polypeptide further lacking a pro-peptide domain corresponding to amino acids 23-62 of hu-Asp1 (see AB878589)); (4) a vector (IV) comprising (III) or (II'); and (5) a host cell (V) transformed or transfected with (III), (II'), and/or (IV). The hu-Asp1 protease substrate (I) may be used as an enzyme substrate in assays to detect aspartyl protease activity, (II) and therefore diagnose diseases associated with aberrant hu-Asp1 expression and activity such as Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present sequence represents human T7-human-Pro-Asp-2(a)deltaTM, which is given in an example from the present invention

Sequence 446 AA;

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pctd. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

22 THGIRLPPLNSGLGAPLGL 41  
|||||  
15 THGIRLPPLNSGLGAPLGL 34

RESULT\_43  
ADJ94334

ID ADJ94334 standard; protein; 446 AA.  
 XX  
 AC ADJ94334;  
 XX  
 DT 03-JUN-2004 (first entry)  
 XX  
 DE Human T7-human-pro-Asp-2(a)deltaTM.  
 XX  
 KM Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);  
 KW beta secretase; amyloid protein precursor; APP; Alzheimer's disease;  
 KM neurotropic; neuroprotective; amyloid beta; mutant; muten.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 PN US6706485-B1.  
 XX  
 PD 16-MAR-2004.  
 XX  
 PF 12-APR-2000; 2000US-00548376.  
 XX  
 PR 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 98US-0155493P.  
 PR 23-SEP-1999; 99WO-05020881.  
 PR 13-OCT-1999; 99US-00416901.  
 XX  
 PA (PHMA ) PHARMACIA & UPJOHN CO.  
 XX  
 PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
 XX  
 DR WPI; 2004-236722/22.  
 DR N-PSDB; ADJ94333.  
 XX  
 PT Identifying agents that modulate activity of Asp2 aspartyl protease  
 PT useful for treating or preventing Alzheimer's disease involves comparing  
 PT APP processing activity of protease in presence and absence of test  
 PT agent.  
 XX  
 PS Example 9; SEQ ID NO 22; 109bp; English.  
 XX  
 CC The invention relates to identifying agents that modulate activity of  
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 CC precursor protein (APP) in the presence and absence of a test agent,  
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptides, identifying a  
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy terminus amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW  
 CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the activity  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease. Preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence represents an aspartyl protease  
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a  
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2  
 CC proteins.  
 XX  
 SQ Sequence 446 AA;

Query Match 100.0%; Score 104; DB 1; Length 446;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 22 TQHGIRLPRLRSGLGAPLGL 41  
 DB 15 TQHGIRLPRLRSGLGAPLGL 34

RESULT 44  
 ID ADO50430 standard; protein; 446 AA.  
 AC ADO50430;  
 XX  
 DT 29-JUL-2004 (first entry)  
 XX  
 DE T7-Human-pro-Asp-2(a)deltaTM protein.  
 XX  
 KM Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;  
 KW Alzheimer's disease; gene therapy; human.

OS Homo sapiens.  
 OS  
 PN US6737510-B1.  
 XX  
 PD 18-MAY-2004.  
 XX  
 PF 12-APR-2000; 2000US-00548373.  
 XX  
 PR 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 98US-0155493P.  
 PR 23-SEP-1999; 99WO-05020881.  
 PR 13-OCT-1999; 99US-00416901.  
 XX  
 PA (PHMA ) PHARMACIA & UPJOHN CO.  
 XX  
 PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
 XX  
 DR WPI; 2004-387112/36.  
 DR N-PSDB; ADO50429.  
 XX  
 PT New Asp2 aspartyl protease protein comprising tripeptides DNG and DSG  
 PT involved in processing amyloid precursor protein into amyloid beta,  
 PT useful in preparing a composition for treating or preventing Alzheimer's  
 PT disease.  
 XX  
 PS Example 9; SEQ ID NO 22; 108bp; English.  
 XX  
 CC The invention relates to a method for identifying an agent that decreases  
 CC the protease activity of the aspartyl protease (Asp) polypeptide. It also  
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
 CC cleavage site of the amyloid precursor protein (APP). The invention is  
 CC useful in preparing a composition for treating or preventing Alzheimer's  
 CC disease. It is also useful in gene therapy. The present sequence is T7-  
 CC Human-pro-Asp-2(a)deltaTM protein. This sequence is used to illustrate  
 CC the method of the invention.  
 XX  
 SQ Sequence 446 AA;

Query Match 100.0%; Score 104; DB 1; Length 446;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
 DB 15 TQHGIRLPRLRSGLGAPLGL 34

RESULT 45  
 ID ADR75343  
 ADR75343 standard; protein; 446 AA.



XX AC ADR75343;  
XX DT 18-NOV-2004 (first entry)  
XX DE T7-Human-pro-Asp-2(a)delatm protein.  
XX KW Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;  
XX KM chromosome identification; Alzheimer's disease; human.  
XX OS Homo sapiens.  
XX OS Synthetic.  
XX PN US2004166507-A1.  
XX PD 26-AUG-2004.  
XX PF 29-AUG-2003; 2003US-00652045.  
XX PR 24-SEP-1998; 98US-0101594P.  
XX PR 23-SEP-1999; 99US-0040413P.  
XX PR 23-SEP-1999; 99US-0155493P.  
XX PR 13-OCT-1999; 99US-00416901.  
XX PA (GURN/) GURNEY M E.  
XX PA (BIEN/) BIENKOWAKI M J.  
XX PA (HEIN/) HEINRIKSON R L.  
XX PA (PARO/) PARODI L A.  
XX PA (YANR/) YAN R.  
XX PI Gurney ME, Bienkowiaki MJ, Heinrichson RL, Parodi LA, Yan R;  
XX DR WPI, 2004-624916/60.  
XX DR N-PSDB; ADR75342.  
XX PT Novel purified/isolated polynucleotide encoding polypeptide having  
XX PT aspartyl protease activity involved in processing amyloid precursor  
XX PT protein into amyloid beta, useful in identifying agent decreasing  
XX PT activity of aspartyl protease.  
XX PS Example 9; SEQ ID NO 22; 107pp; English.  
XX XS The invention relates to nucleic acid sequences encoding aspartyl  
XX CC protease (Asp) polypeptides having aspartyl protease activity involved in  
XX CC processing amyloid precursor protein (APP) into amyloid beta. The  
XX CC invention also relates to a method for identifying an agent that  
XX CC decreases the protease activity of the Asp. Asp DNA is useful in  
XX CC chromosome identification as they can hybridize with a specific location  
XX CC on a human chromosome and in identifying the relationship between genes  
XX CC and diseases (particular gene responsible for causing diseases). It is  
XX CC also useful for identifying candidates to modulate the progression of  
XX CC Alzheimer's disease. Asp is useful in raising antibodies that are useful  
XX CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The  
XX CC present sequence is the T7-Human-pro-Asp-2(a)delatm protein. This  
XX CC sequence is used to illustrate the method of the invention.  
XX SQ Sequence 446 AA;  
Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 22 TONGIRLPLRSGLGAPLGL 41  
DB 15 TONGIRLPLRSGLGAPLGL 34

DT 03-AUG-2000 (first entry)  
XX DE Modified human aspartyl protease 2 (Asp2) amino acid sequence.  
XX KW Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;  
XX KM Alzheimer's disease; beta secretase site.  
XX OS Homo sapiens.  
XX PN WO200017369-A2.  
XX PD 30-MAR-2000.  
XX PF 23-SEP-1999; 99WO-US020881.  
XX PR 24-SEP-1998; 98US-0101594P.  
XX PA (PHAA ) PHARMACIA & UPJOHN CO.  
XX PI Gurney ME, Bienkowiaki MJ, Heinrichson RL, Parodi LA, Yan R;  
XX DR WPI, 2000-303209/26.  
XX DR N-PSDB; AAAL5688.  
XX PT New enzyme designated human aspartase useful in research into Alzheimer's  
XX PT Disease is capable of cleaving amyloid protein precursor at the beta  
XX PT secretase site to produce amyloid beta peptide.  
XX PS Example 10; Page 169-172; 183pp; English.  
XX XS This sequence represents a modified human aspartyl protease 2 (Asp2)  
XX CC amino acid sequence. Asp2 encoded by this sequence has the C-terminal  
XX CC transmembrane domain deleted. The invention relates to a protease (e.g.  
XX CC Asp2) capable of cleaving the beta secretase site of amyloid precursor  
XX CC protein (APP). The protease contains a sequence encoding the amino acid  
XX CC sequence DTG and a sequence encoding DSG or DTG separated by 100-300  
XX CC amino acids. When mutated the APP gene causes an autosomal dominant form  
XX CC of Alzheimer's disease. APP localizes to the cell surface membrane and  
XX CC have a single C-terminal transmembrane domain. Proteolytic processing of  
XX CC APP produces the amyloid beta protein, which is possibly very important  
XX CC in Alzheimer's disease. The invention includes a nucleotide sequence  
XX CC encoding the protease, a vector containing the nucleotide sequence, and a  
XX CC cell line comprising the vector. Methods for screening for inhibitors of  
XX CC aspartase protein and nucleotide sequences and the methods for  
XX CC identifying inhibitors of the protease, are useful in the treatment of  
XX CC and research in to Alzheimer's disease  
XX SQ Sequence 453 AA;  
Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 22 TONGIRLPLRSGLGAPLGL 41  
DB 22 TONGIRLPLRSGLGAPLGL 41

RESULT 47  
AAU07215  
ID AAU07215 standard; protein; 453 AA.  
AC AAU07215;  
DT 24-OCT-2001 (first entry)  
DE Human aspartyl protease 2a delatm (HuAsp-2adeltatm).  
KW Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;  
KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;  
KW beta-secretase; Alzheimer's disease; HuAsp-2adeltatm.  
XX

```

OS Homo sapiens.
XX
XX Key Location/Qualifiers
FH Peptide 1..21
FT /note="Signal peptide"
FT Protein 22..453
FT /note="Mature human aspartyl protease 2a deltatm"
XX
XX MO200149097-A2.
XX
XX 12-JUL-2001.
XX
XX PF 09-MAY-2001; 2001WO-IB000797.
XX
XX PR 09-MAY-2001; 2001WO-IB000797.
XX
XX PA (BIEN/) BIENKOWSKI M J.
XX PA (GURNEY/) GURNEY M E.
XX PA (HEIN/) HEINRIKSON R L.
XX PA (PARO/) PARODI L A.
XX PA (YANR/) YAN R.
XX
XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX
XX DR MPI; 2001-502548/55.
XX DR N-PSDB; AAS11715.
XX
XX PT Novel purified polypeptide comprising fragment of mammalian aspartyl
XX PT protease 2, lacking Asp2 transmembrane domain and retaining beta
XX PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX PT activity.
XX
XX PS Claim 149, Fig 11; 185pp; English.
XX
XX CC The invention relates to a novel purified polypeptide comprising a
XX CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
XX CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
XX CC and the fragment retain the beta-secretase activity of the mammalian Asp2
XX CC protein. Also included is an isoform of amyloid protein precursor (APP)
XX CC comprising the amino acid sequence of a APP or its fragment containing an
XX CC APP cleavage site recognizable by a mammalian beta-secretase, and further
XX CC comprising two lysine residues at the carboxyl terminus of the amino acid
XX CC sequence of the mammalian APP or APP fragment. The polypeptides are used
XX CC for assaying for modulators of beta-secretase activity; identifying
XX CC agents that inhibit the APP processing activity of human Asp2 aspartyl
XX CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
XX CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.
XX CC Agents identified by the above methods are useful for treating
XX CC Alzheimer's disease; and for identifying modulators of amyloid-beta
XX CC (Abeta) peptide production, for use in designing therapeutics for the
XX CC treatment or prevention of Alzheimer's disease. Probes and primers
XX CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
XX CC nucleic acids in in vitro assays and in Northern and Southern blots. The
XX CC present sequence represents the amino acid sequence of human Asp-2a delta
XX CC TM construct which lacks the transmembrane domain. This construct was
XX CC used for bacterial expression and purification of human Asp2a
XX
XX SQ Sequence 453 AA;

```

```

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 22 TQHGIRLPRLRSGLGAPLGL 41

```

```

RESULT 48
AAE10642
ID AAE10642 standard; protein; 453 AA.
XX
AC AAE10642;

```

```

XX
XX 10-DEC-2001 (first entry)
XX
XX DE Human-Asp 2(a) protein lacking transmembrane domain.
XX
XX KW Human: aspartyl protease 2a; Asp2a; amyloid precursor protein; APP;
XX KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
XX KW amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective.
XX
XX OS Homo sapiens.
XX OS Synthetic.
XX
XX FH Key Location/Qualifiers
FT Misc-difference 214
FT /note="Encoded by CAC"
XX
XX GN GB2357767-A.
XX
XX PD 04-JUL-2001.
XX
XX PF 22-SEP-2000; 2000GB-00023315.
XX
XX PR 23-SEP-1999; 99US-00404133.
XX PR 23-SEP-1999; 99US-0155493P.
XX PR 23-SEP-1999; 99WO-US020881.
XX PR 13-OCT-1999; 99US-00416901.
XX PR 06-DEC-1999; 99US-0169232P.
XX
XX PA (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX PI Bienkowski MJ, Gurney M;
XX
XX DR MPI; 2001-444208/48.
XX DR N-PSDB; AAD17878.
XX
XX PT Polypeptide comprising fragments of human aspartyl protease with amyloid
XX PT precursor protein processing activity and alpha-secretase activity, for
XX PT identifying modulators useful in treating Alzheimer's disease.
XX
XX PS Example 10; Fig 11; 187pp; English.
XX
XX CC The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX CC proteins which lack transmembrane domain or amino terminal domain or
XX CC cytoplasmic domain and retains alpha-secretase activity and amyloid
XX CC protein precursor (APP) processing activity. The proteins of the
XX CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX CC activity, where modulators that increase hu-Asp1 alpha-secretase
XX CC are useful for treating Alzheimer's disease (AD) which causes progressive
XX CC dementia with consequent formation of amyloid plaques, neurofibrillary
XX CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
XX CC with the substrate under acidic conditions and determining the level of
XX CC hu-Asp1 proteolytic activity. The present sequence is human Asp 2(a)
XX CC protein lacking a transmembrane (TM) domain. This sequence is generated
XX CC by the deletion of the C-terminal TM domain of human Asp 2(a) protein
XX
XX SQ Sequence 453 AA;

```

```

Query Match 100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

QY 22 TQHGIRLPRLRSGLGAPLGL 41
DB 22 TQHGIRLPRLRSGLGAPLGL 41

```

```

RESULT 49
AAE06872
ID AAE06872 standard; protein; 453 AA.
XX
AC AAE06872;

```

```

XX 23-OCT-2001 (first entry)
XX
XX
DB Human-Asp2(a) deltaTM protein.
XX
XX Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
XX beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
XX neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nototropic;
XX neuroprotective; antisense therapy; Asp2(a) deltaTM protein;
XX gene therapy.
XX
XX Homo sapiens.
XX OS
XX Synthetic.
XX
XX Key location/Qualifiers
XX FT Misc-difference 214 /note= "Encoded by CAC"
XX
XX
XX W0200150829-A2.
XX
XX 19-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000799.
XX
XX 09-MAY-2001; 2001WO-IB000799.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX
XX WPI; 2001-483072/52.
XX DR N-PSDB; AAD13034.
XX
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Claim 149; Fig 11; 185pp; English.
XX
XX
XX The invention relates to human aspartyl proteases (Hu-App), beta-amyloid
XX precursor protein (APP) isoforms and their corresponding DNA molecules.
XX Human aspartyl proteases can act as beta-secretase proteases useful for
XX treating Alzheimer's disease. APP isoforms are useful for identifying
XX modulators of amyloid-beta peptide production, for use in designing
XX therapeutics for the treatment and prevention of Alzheimer's disease,
XX dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX and neuronal loss. APP isoforms are also used in methods for identifying
XX inhibitors and modulators of human Asp2 activity. The invention relates
XX to a method for identifying agents that modulate the activity of human
XX aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX as a means to screen in cellular assays for the inhibitors of beta- and
XX gamma- secretase. Hu-App DNA fragments are useful as probes or primers in
XX polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX App nucleic acids in in vitro assays and in Northern and Southern blots.
XX The present sequence is Human aspartyl protease 2a (Hu-Asp2a) deltaTM
XX protein which is obtained by the deletion of transmembrane domain at the
XX C-terminal end of Hu-Asp2a. Human Asp2a has beta-secretase activity
XX
XX Sequence 453 AA;

```

```

RESULT 50
AAE02594
ID AAE02594 standard; protein; 453 AA.
XX
XX AAE02594;
AC
XX 10-AUG-2001 (first entry)
XX
XX Human-Asp-2(a) delta TM protein.
DE
XX
XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;
XX Alzheimer's disease; antiAlzheimer's; aspartyl protease 2a; Asp2a;
XX beta-secretase; Asp-2a delta TM.
XX
XX Homo sapiens.
XX OS
XX Synthetic.
XX
XX Key location/Qualifiers
XX FT Misc-difference 214 /note= "Encoded by CAC"
XX
XX
XX W0200123533-A2.
XX
XX 05-APR-2001.
XX
XX 22-SEP-2000; 2000WO-US026080.
XX
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020681.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney M, Bienkowski MJ;
XX
XX WPI; 2001-290516/30.
XX DR N-PSDB; AAD06752.
XX
XX
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX protein, useful for the treatment of Alzheimer's disease.
XX
XX Example 10; Fig 11; 189pp; English.
XX
XX
XX The present invention relates to enzymes for cleaving the alpha-
XX secretase site of the amyloid precursor protein (APP) and methods of
XX identifying those enzymes. The methods may be used to identify enzymes
XX that may be used to cleave the alpha-secretase cleavage site of the APP
XX protein. The enzymes may be used to treat or modulate the progress of
XX Alzheimer's disease. The present sequence is human aspartyl protease 2a
XX (Asp-2a) deltaTM protein which is obtained by deleting its transmembrane
XX domain. This sequence has beta-secretase protease activity
XX
XX Sequence 453 AA;

```

Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

22 TONGIRLPNRSGLGAPLGL 41  
22 TONGIRLPNRSGLGAPLGL 41

Db

RESULT 51  
AAU06616  
ID AAU06616 standard; protein; 453 AA.  
XX  
XX AAU06616;  
AC  
XX 24-OCT-2001 (first entry)  
XX

DE Human-pro-Asp 2(a) delta TM.  
 XX  
 KM Human; Aspartyl protease; beta-secretase; neurotropic; Asp2;  
 KM neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;  
 KM amyloid-beta; Abeta; Human-pro-Asp 2(a) delta TM; mutant; mucin.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 XX Key Location/Qualifiers  
 FH Peptide 1..21  
 FT /label= Signal\_peptide  
 FT Protein 22..453  
 FT /label= Mature\_Human\_pro\_Asp\_2(a)\_delta\_TM  
 FT Misc-difference 214  
 FT /note= "Encoded by CAC"  
 XX  
 XX MO200149098-A2.  
 PD 12-JUL-2001.  
 XX  
 XX 09-MAY-2001; 2001WO-1B000798.  
 PF  
 XX 09-MAY-2001; 2001WO-1B000798.  
 PR  
 XX (BIEN/) BINKOWSKI M J.  
 PA (GURN/) GURNEY M E.  
 PA (HEIN/) HEINRIKSON R L.  
 PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.  
 XX  
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 XX WPI: 2001-502549/55.  
 DR N-PSDB; AAS11530.  
 XX  
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.  
 XX  
 XX Claim 149; Page 160; 185pp; English.  
 PS  
 XX  
 CC The invention relates to a purified polypeptide comprising a fragment of  
 CC mammalian aspartyl protease (Asp2) protein which lacks the Asp2  
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and  
 CC the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. The invention also details polynucleotides for the Asp proteins  
 CC and vectors expressing them, and a polypeptide (isoform of amyloid  
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or  
 CC its fragment containing an APP cleavage site recognizable by a mammalian  
 CC beta-secretase, and further comprising two lysine residues at the  
 CC carboxyl terminals of the amino acid sequence of the mammalian APP or APP  
 CC fragment. Also included in the invention are methods of identifying  
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
 CC useful for treating Alzheimer's disease. APP is useful in methods for  
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-  
 CC beta (Abeta) peptide production. APP is also useful in designing  
 CC therapeutic for the treatment or prevention of Alzheimer's disease. APP  
 CC comprising the APP-Sw-beta-secretase peptide sequence (NLPA), which is  
 CC associated with increased levels of Abeta processing is useful in assays  
 CC relating the Alzheimer's research. The expression vector is useful for  
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp  
 CC oligonucleotides are useful as probes or primers. The probes are useful  
 CC for detecting hu-Asp nucleic acids in in vitro assays and in Northern and  
 CC Southern blots. The present sequence is Human-pro-Asp 2(a) delta TM  
 CC and protein, which lacks the C-terminal transmembrane domain  
 XX  
 XX Sequence 453 AA;  
 SQ  
 Query Match 100.0%; Score 104; DB 1; Length 453;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLP LNSGLGAPLGL 41  
 DB 22 TQHGIRLP LNSGLGAPLGL 41  
 RESULT 52  
 ABB78603  
 ID ABB78603 standard; protein; 453 AA.  
 AC ABB78603;  
 XX  
 XX 16-JUL-2002 (first entry)  
 DT  
 XX  
 XX Human Asp-2(a)deltaTM protein sequence SEQ ID NO:30.  
 DE  
 XX  
 KM Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;  
 KM chromosome 11q23.3-24.1.  
 XX  
 XX Homo sapiens.  
 OS  
 XX  
 XX Key Location/Qualifiers  
 FH Key  
 FT Misc-difference 214  
 FT /note= "encoded by CAC"  
 XX  
 XX GB2367060-A.  
 XX  
 PD 27-MAR-2002.  
 XX  
 XX 29-OCT-2001; 2001GB-00025934.  
 PF  
 XX 23-SRP-1999; 99US-00404133.  
 PR 23-SRP-1999; 99US-0155493P.  
 PR 23-SRP-1999; 99WO-05020881.  
 PR 13-OCT-1999; 99US-00416901.  
 PR 06-DEC-1999; 99US-0169232P.  
 PR 22-SRP-2000; 2000GB-00023315.  
 XX  
 PA (PHMA ) PHARMACIA & UPJOHN CO.  
 XX  
 PI Bienkowski MJ, Gurney M;  
 XX WPI: 2002-397167/43.  
 DR N-PSDB; ABL52470.  
 XX  
 PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.  
 XX  
 PS Example 10; Fig 11; 182pp; English.  
 XX  
 CC The present invention describes a human aspartyl protease 1 (hu-Asp1)  
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,  
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
 CC (I) under acidic conditions; and (b) determining the level of hu-Asp1  
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a  
 CC nucleotide sequence that hybridizes under stringent conditions to the non-  
 CC coding strand complementary to a defined 1804 nucleotide sequence (see  
 CC AB152456) where the nucleotide sequence encodes a polypeptide having Asp1  
 CC proteolytic activity and lacks nucleotides encoding a transmembrane  
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that  
 CC hybridizes under stringent conditions to (III) (the nucleotide sequence  
 CC encodes a polypeptide of further lacking a pro-peptide domain corresponding  
 CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)  
 CC comprising (III) or (III'); and (5) a host cell (V) transformed or  
 CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease  
 CC substrate (I) may be used as an enzyme substrate in assays to detect  
 CC aspartyl protease activity, (II) and therefore diagnose diseases  
 CC associated with aberrant hu-Asp1 expression and activity such as  
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
 CC sequence represents human Asp-2(a)deltaTM, which is given in an example

CC from the present invention  
XX Sequence 453 AA;  
SQ  
Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLRSGGAPLGL 41  
DB 22 TQHGIRLPRLRSGGAPLGL 41  
RESULT 53  
ADJ94342  
ID ADJ94342 standard; protein; 453 AA.  
AC ADJ94342;  
XX  
DT 03-JUN-2004 (first entry)  
XX  
DE Human-pro-Asp-2(a)deltaTM.  
XX  
KM Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);  
KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;  
KM neurotropic; neuroprotective; amyloid beta; mutant; mutein.  
XX Homo sapiens.  
OS Synthetic.  
XX  
PN US6706485-B1.  
XX  
PD 16-MAR-2004.  
XX  
PF 12-APR-2000; 2000US-00548376.  
XX  
PR 24-SEP-1998; 98US-0101594P.  
PR 23-SEP-1999; 99US-00404133.  
PR 23-SEP-1999; 99US-0155493P.  
PR 23-SEP-1999; 99WO-US020881.  
PR 13-OCT-1999; 99US-00416901.  
XX  
PA (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;  
XX  
DR WPI; 2004-236722/22.  
DR N-PSDB; ADJ94341.  
XX  
PT Identifying agents that modulate activity of Asp2 aspartyl protease  
PT useful for treating or preventing Alzheimer's disease involves comparing  
PT APP processing activity of protease in presence and absence of test  
PT agent.  
XX  
PS Example 10; SEQ ID NO 30; 109pp; English.  
XX  
CC The invention relates to identifying agents that modulate activity of  
CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
CC precursor protein (APP) in the presence and absence of a test agent,  
CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
CC beta, determining APP processing activity of Asp2 in presence and absence  
CC of the test agent, and comparing the activities to identify agents that  
CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
CC the vector and the method of producing Hu-Asp polypeptides, identifying a  
CC antibody that specifically binds to Hu-Asp polypeptides, identifying a  
CC cell that can be used to screen for inhibitors of beta secretase  
CC activity, novel isoforms of amyloid protein precursor (APP), where the  
CC last 2 carboxy terminus amino acids of that isoform are both lysine  
CC residues (e.g. those designated APP695-KK or carrying the Swedish  
CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW

CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
CC for assaying for beta secretase activity and screening for inhibitors of  
CC beta-secretase) and polynucleotides that encode the APP proteins. The  
CC method is useful for identifying agents that modulate the activity  
CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
CC protease. Preferably, the method is useful for identifying agents that  
CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
CC precursor protein processing, are useful for treating or preventing  
CC Alzheimer's disease. The present sequence represents an aspartyl protease  
CC mutant construct (e.g. lacking a transmembrane domain and/or including a  
CC caspase cleavage site) used to investigate the cleavage activity of Asp2  
CC proteins.  
XX  
SQ Sequence 453 AA;  
QY  
Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
DB 22 TQHGIRLPRLRSGGAPLGL 41  
QY 22 TQHGIRLPRLRSGGAPLGL 41  
DB 22 TQHGIRLPRLRSGGAPLGL 41  
RESULT 54  
ADJ50438  
ID ADJ50438 standard; protein; 453 AA.  
XX  
AC ADJ50438;  
XX  
DT 29-JUL-2004 (first entry)  
XX  
DE Human Asp-2(a)deltaTM mutant protein.  
XX  
KM Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;  
KM Alzheimer's disease; gene therapy; human; gene; mutant; mutein.  
XX  
OS Homo sapiens.  
OS Synthetic.  
XX  
PN US6737510-B1.  
XX  
PD 16-MAY-2004.  
XX  
PF 12-APR-2000; 2000US-00548373.  
XX  
PR 24-SEP-1998; 98US-0101594P.  
PR 23-SEP-1999; 99US-00404133.  
PR 23-SEP-1999; 99US-0155493P.  
PR 23-SEP-1999; 99WO-US020881.  
PR 13-OCT-1999; 99US-00416901.  
XX  
PA (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;  
XX  
DR WPI; 2004-387112/36.  
DR N-PSDB; ADJ50437.  
XX  
PT New APP2 aspartyl protease protein comprising tripeptides DTG and DSG  
PT involved in processing amyloid precursor protein into amyloid beta,  
PT useful in preparing a composition for treating or preventing Alzheimer's  
PT disease.  
XX  
PS Example 10; SEQ ID NO 30; 108pp; English.  
XX  
CC The invention relates to a method for identifying an agent that decreases  
CC the protease activity of the aspartyl protease (Asp) polypeptide. It also  
CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
CC cleavage site of the amyloid precursor protein (APP). The invention is  
CC useful in preparing a composition for treating or preventing Alzheimer's  
CC disease. It is also useful in gene therapy. The present sequence is human  
CC Asp-2(a)deltaTM mutant protein. This sequence is used to illustrate the

CC method of the invention.  
 XX  
 XX Sequence 453 AA;  
 SQ

Query Match 100.0%; Score 104; DB 1; Length 453;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGAGAPLGL 41  
 |||||  
 Db 22 TONGIRLPLRSGAGAPLGL 41

RESULT 55  
 ADR75351  
 ID ADR75351 standard; protein; 453 AA.  
 XX  
 XX ADR75351;  
 AC  
 DT 18-NOV-2004 (first entry)  
 XX  
 XX Human Asp-2(a) deltatm mutant protein.  
 DE  
 XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;  
 KM chromosome identification; Alzheimer's disease; human; mutant; mutein.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 OS  
 FH Key Location/Qualifiers  
 FT Misc-difference 214  
 FT /note= "Encoded by CAC"  
 FT  
 PN US2004166507-A1.  
 XX  
 PD 26-AUG-2004.  
 XX  
 PF 29-AUG-2003; 2003US-00652045.  
 XX  
 PR 24-SEP-1998; 98US-0101594P.  
 XX  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 13-OCT-1999; 99US-00416901.  
 XX  
 PA (GURN/) GURNEY M E.  
 PA (BIEN/) BIENKOWAKI M J.  
 PA (HEIN/) HEINRIKSON R L.  
 PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.  
 XX  
 PI Gurney ME, Bienkowaki MJ, Heinrichson RL, Parodi LA, Yan R;  
 XX  
 DR WPI; 2004-624916/60.  
 DR N-PSDB; ADR75350.  
 XX

Novel purified/isolated polynucleotide encoding polypeptide having aspartyl protease activity involved in processing amyloid precursor protein into amyloid beta, useful in identifying agent decreasing activity of aspartyl protease.

Example 10; SEQ ID NO 30; 107P; English.

The invention relates to nucleic acid sequences encoding aspartyl protease (Asp) polypeptides having aspartyl protease activity involved in processing amyloid precursor protein (APP) into amyloid beta. The invention also relates to a method for identifying an agent that decreases the protease activity of the Asp. Asp DNA is useful in chromosome identification as they can hybridise with a specific location on a human chromosome and in identifying the relationship between genes and diseases (particular gene responsible for causing diseases). It is also useful for identifying candidates to modulate the progression of Alzheimer's disease. Asp is useful in raising antibodies that are useful in diagnostic assay for detecting Hu-Asp polypeptide expression. The

CC present sequence is the human Asp-2(a) deltatm mutant protein. This  
 CC sequence is used to illustrate the method of the invention.  
 XX  
 XX Sequence 454 AA;  
 SQ

Query Match 100.0%; Score 104; DB 1; Length 454;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGAGAPLGL 41  
 |||||  
 Db 22 TONGIRLPLRSGAGAPLGL 41

RESULT 56  
 ADJ57781  
 ID ADJ57781 standard; protein; 454 AA.  
 XX  
 XX ADJ57781;  
 AC  
 DT 06-MAY-2004 (first entry)  
 XX  
 XX BACE WT R57DEL protein.  
 DE  
 XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;  
 KM Alzheimer's disease.  
 XX  
 OS Synthetic.  
 OS  
 PN WO2004011641-A2.  
 XX  
 PD 05-FEB-2004.  
 XX  
 PF 25-JUL-2003; 2003WO-GB003200.  
 XX  
 PR 26-JUL-2002; 2002US-0398681P.  
 XX  
 PA (ASTE-) ASTEX TECHNOLOGY LTD.  
 XX  
 PI Vulliard LMM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;  
 XX  
 DR WPI; 2004-169242/16.  
 DR N-PSDB; ADJ57780.  
 XX

New beta site APP cleaving enzyme (BACE) protein, useful for treating or preventing Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome.

Claim 10; SEQ ID NO 10; 145P; English.

The present invention relates to a beta site APP cleaving enzyme (BACE) protein. The compound or the composition is useful in medicine and the BACE crystal structure is useful for drug discovery. The BACE protein, compounds, pharmaceutical compositions, medicament, drug or other composition comprising the compound is useful for treating or preventing Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The present sequence represents the DNA sequence for a BACE protein.

Sequence 454 AA;

Query Match 100.0%; Score 104; DB 1; Length 454;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGAGAPLGL 41  
 |||||  
 Db 22 TONGIRLPLRSGAGAPLGL 43

RESULT 57  
 ADC81563  
 ID ADC81563 standard; protein; 455 AA.  
 XX

AC	ADCB81563;
XX	
DT	01-JAN-2004 (first entry)
XX	
DE	Recombinant BACE protein from pET11a-P33K-BACE SEQ ID NO:7.
XX	
KW	human; BACE; modification; Pro33lys; pro-enzyme.
XX	
OS	Synthetic.
OS	Homo sapiens.
PV	MO2003072733-A2.
XX	
PD	04-SEP-2003.
XX	
PE	21-FEB-2003; 2003WO-US005508.
XX	
PR	21-FEB-2002; 2002US-0358651P.
XX	
PA	(PHMA ) PHARMACIA & UPJOHN CO.
XX	
P1	Chou K, Howe JM;
XX	
DR	WP1: 2003-712719/67.
XX	
DR	N-PSDB; ADCB81562.
XX	
PT	BACE polypeptides having Pro33lys modification, useful in determining
PT	possible mutations, which will inhibit enzyme activity, and in
PT	determining potential active site for target molecules.
XX	
XX	Example 1; Fig 4A-B; 38pp; English.
XX	
CC	The present invention describes an isolated polypeptide (I) comprising or
CC	consisting of a fully defined sequence of 432 amino acids (see ADCB81561),
CC	and comprising human BACE having the modification Pro33lys. Also
CC	described: (1) a composition comprising an active human BACE enzyme
CC	comprising the pro-enzyme sequence of BACE having the modification
CC	Pro33lys; (2) an isolated polynucleotide comprising a sequence encoding
CC	(1); (3) an isolated polynucleotide consisting or consisting of
CC	nucleotides 70-1365 of a 1355-bp sequence (see ADCB81562); (4) an
CC	expression vector comprising the polynucleotide of (2), or a
CC	polynucleotide sequence encoding a Pro33lys-BACE polypeptide, where the
CC	expression vector can produce the Pro33lys-BACE polypeptide when present
CC	in a compatible host cell, when cultured under conditions that allow
CC	production; (5) a recombinant host cell comprising the expression vector;
CC	and (6) producing a (active) Pro33lys-BACE polypeptide. The BACE
CC	polypeptide having Pro33lys modification may be used in determining
CC	possible mutations, which will inhibit enzyme activity, and in
CC	determining potential active site for target molecule. The vector
CC	comprising the BACE polynucleotide is useful for producing recombinant
CC	BACE polypeptides having Pro33lys modification. The present sequence
CC	represents recombinant BACE expressed from a pET11a-P33K-BACE construct,
CC	from the present invention.
XX	
SO	Sequence 455 AA:
XX	
Query Match	100.0%; Score 104; DB 1; Length 455;
Best Local Similarity	100.0%; Pred. No. 33;
Matches	20; Conservative 0; Mismatches 0; Indels 0; Gaps 0
OY	22 TQHGIRLPRLRSGLGAPLGL 41       
DB	24 TQHGIRLPRLRSGLGAPLGL 43 
RESULT 58	
ID	ADJ57785
XX	ADJ57785 standard; protein; 455 AA.
XX	
AC	ADJ57785;
XX	
DT	06-MAY-2004 (first entry)
XX	

```

DE  BACE N-Q R56KR57Knoh1s protein.
KW  beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
KW  Alzheimer's disease.
XX
OS  Synthetic.
XX
PN  WO2004011641-A2.
XX
PD  05-FEB-2004.
XX
PF  25-JUL-2003; 2003WO-GB003200.
XX
PR  26-JUL-2002; 2002US-0398681P.
XX
PA  (ASTE-) ASTEX TECHNOLOGY LTD.
XX
PI  Vulliard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;
XX
XX  WPI; 2004-169242/16.
XX  N-PSDB; ADJ57784.
XX
PT  New beta site APP cleaving enzyme (BACE) protein, useful for treating or
PT  preventing Alzheimer's disease or Alzheimer's-type pathology of Down's
PT  syndrome.
XX
PS  Claim 10; SEQ ID NO 14; 145pp; English.
XX
CC  The present invention relates to a beta site APP cleaving enzyme (BACE)
CC  protein. The compound or the composition is useful in medicine and the
CC  BACE crystal structure is useful for drug discovery. The BACE protein,
CC  compound, pharmaceutical compositions, medication, drug or other
CC  composition comprising the compound is useful for treating or preventing
CC  Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The
CC  present sequence represents the DNA sequence for a BACE protein.
XX
SQ  Sequence 455 AA;

Query Match          100.0%; Score 104; DB 1; Length 455;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY  22 TQHGIRLPINSGLCGAPVGL 41
    ||||||||||||||||
DB  24 TQHGIRLPINSGLCGAPVGL 43

RESULT 59
ADJ57779
ID  ADJ57779 standard; protein; 455 AA.
XX
AC  ADJ57779;
XX
DT  06-MAY-2004 (first entry)
XX
DE  BACE WT R57K protein.
XX
KW  beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;
KW  Alzheimer's disease.
XX
OS  Synthetic.
XX
PN  WO2004011641-A2.
XX
PD  05-FEB-2004.
XX
PF  25-JUL-2003; 2003WO-GB003200.
XX
PR  26-JUL-2002; 2002US-0398681P.
XX
PA  (ASTE-) ASTEX TECHNOLOGY LTD.
XX
PI  Vulliard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

```



XX WPI: 2004-169242/16.  
DR N-PSDB; ADJ57778.  
XX  
PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's  
XX syndrome.  
XX  
PS Claim 10; SEQ ID NO 8; 145bp; English.  
XX  
CC The present invention relates to a beta site APP cleaving enzyme (BACE)  
CC protein. The compound or the composition is useful in medicine and the  
CC BACE crystal structure is useful for drug discovery. The BACE protein,  
CC compounds, pharmaceutical compositions, medicament, drug or other  
CC composition comprising the compound is useful for treating or preventing  
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The  
CC present sequence represents the DNA sequence for a BACE protein.  
SQ Sequence 455 AA;

Query Match 100.0%; Score 104; DB 1; Length 455;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41  
DB 24 TONGIRLPLRSGLGAPLGL 43

## RESULT 60

ADJ57773  
ID ADJ57773 standard; protein; 455 AA.

AC ADJ57773;

DT 06-MAY-2004 (first entry)

DE BACE WT protein.

XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;  
KM Alzheimer's disease.

XX Synthetic.

PM WO2004011641-A2.

XX 05-FEB-2004.

PD 25-JUL-2003; 2003WO-GB003200.

PR 26-JUL-2002; 2002US-0398681P.

FA (ASTE-) ASTEX TECHNOLOGY LTD.

PI Vuillard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

XX WPI: 2004-169242/16.

DR N-PSDB; ADJ57772.

XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's  
XX syndrome.

PS Claim 1; SEQ ID NO 2; 145bp; English.

XX The present invention relates to a beta site APP cleaving enzyme (BACE)  
CC protein. The compound or the composition is useful in medicine and the  
CC BACE crystal structure is useful for drug discovery. The BACE protein,  
CC compounds, pharmaceutical compositions, medicament, drug or other  
CC composition comprising the compound is useful for treating or preventing  
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The  
CC present sequence represents the DNA sequence for a BACE protein.

SQ Sequence 455 AA;

Query Match 100.0%; Score 104; DB 1; Length 455;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41  
DB 24 TONGIRLPLRSGLGAPLGL 43

## RESULT 61

ADJ57777  
ID ADJ57777 standard; protein; 455 AA.

AC ADJ57777;

DT 06-MAY-2004 (first entry)

DE BACE WT R56KR57K protein.

XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;  
KM Alzheimer's disease.

XX Synthetic.

PM WO2004011641-A2.

XX 05-FEB-2004.

PD 25-JUL-2003; 2003WO-GB003200.

PR 26-JUL-2002; 2002US-0398681P.

FA (ASTE-) ASTEX TECHNOLOGY LTD.

PI Vuillard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

XX WPI: 2004-169242/16.

DR N-PSDB; ADJ57776.

XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's  
XX syndrome.

PS Claim 10; SEQ ID NO 6; 145bp; English.

XX The present invention relates to a beta site APP cleaving enzyme (BACE)  
CC protein. The compound or the composition is useful in medicine and the  
CC BACE crystal structure is useful for drug discovery. The BACE protein,  
CC compounds, pharmaceutical compositions, medicament, drug or other  
CC composition comprising the compound is useful for treating or preventing  
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The  
CC present sequence represents the DNA sequence for a BACE protein.

SQ Sequence 455 AA;

Query Match 100.0%; Score 104; DB 1; Length 455;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41  
DB 24 TONGIRLPLRSGLGAPLGL 43

## RESULT 62

ABR61929  
ID ABR61929 standard; protein; 456 AA.

AC ABR61929;

DT 12-SEP-2003 (first entry)

```
XX DE Human promemapsin 2-T1 protein.
XX KW Memapsin 1; neurotrophic; neuroprotective; memapsin 2; beta secretase;
XX KM beta-amyloid protein; Alzheimer's disease; promemapsin 2-T1; human.
XX OS Homo sapiens.
XX PN W02003039454-A2.
XX PD 15-MAY-2003.
XX PF 23-OCT-2002; 2002WO-US034324.
XX PR 23-OCT-2001; 2001US-0335952P.
XX PR 27-NOV-2001; 2001US-033545P.
XX PR 14-JAN-2002; 2002US-034846P.
XX PR 14-JAN-2002; 2002US-0348615P.
XX PR 20-JUN-2002; 2002US-0390804P.
XX PR 19-JUL-2002; 2002US-0397557P.
XX PR 19-JUL-2002; 2002US-0397619P.
XX PA (OKLA-) OKLAHOMA MEDICAL RES FOUND.
XX PA (UNIT ) UNIV ILLINOIS FOUND.
XX PI Ghosh AK, Tang J, Bilcer G, Chang W, Hong L, Koelsch G, Loy J;
XX PI Turner RT;
XX DR WPI; 2003-541410/51.
XX DR N-PSDB; ACC84850.
XX PT New peptide compounds are memapsin beta secretase inhibitors used for
XX PT treating Alzheimer's disease.
XX PS Claim 96; Fig 11; 407pp; English.
XX CC The invention relates to peptide compounds of specified formula. The
XX CC compounds exhibit memapsin 2-beta secretase inhibitory activity relative
XX CC to memapsin 1-beta secretase and reduce the accumulation of beta-amyloid
XX CC protein. The compounds can be used for treating Alzheimer's disease. The
XX CC present sequence represents a human promemapsin 2-T1 protein
XX SQ Sequence 456 AA;

Query Match 100.0%; Score 104; DB 1; Length 456;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLRSGLGAPLGL 41
DB 24 TOHGIRLPRLRSGLGAPLGL 43

RESULT 63
AAV88439
ID AAV88439 standard; protein; 459 AA.
XX AC AAV88439;
XX DT 03-AUG-2000 (first entry)
XX DE Modified human aspartyl protease 2 (Asp2) amino acid sequence.
XX KW Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;
XX KM Alzheimer's disease; beta secretase site.
XX OS Homo sapiens.
XX PN W0200017369-A2.
XX PD 30-MAR-2000.
XX PF 23-SEP-1999; 99WO-US020881.
XX PR 23-SEP-1999; 99WO-US020881.
```

```
XX PR 24-SEP-1998; 98US-0101594P.
XX PA (PHAA ) PHARMACIA & UPJOHN CO.
XX PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX PR WPI; 2000-303209/26.
XX DR N-PSDB; AAA15689.
XX PT New enzyme designated human aspartase useful in research into Alzheimer's
XX PT Disease is capable of cleaving amyloid protein precursor at the beta
XX PT secretase site to produce amyloid beta peptide.
XX PS Example 10; Page 173-176; 183pp; English.
XX CC This sequence represents a modified human aspartyl protease 2 (Asp2)
XX CC amino acid sequence. Asp2 encoded by this sequence has the C-terminal
XX CC transmembrane domain deleted. The invention relates to a protease (e.g.
XX CC Asp2) capable of cleaving the beta secretase site of amyloid precursor
XX CC protein (APP). The protease contains a sequence encoding the amino acid
XX CC sequence DTG and a sequence encoding DSG or DTG separated by 100-300
XX CC amino acids. When mutated the APP gene causes an autosomal dominant form
XX CC of Alzheimer's disease. APP localises to the cell surface membrane and
XX CC have a single C-terminal transmembrane domain. Proteolytic processing of
XX CC APP produces the amyloid beta protein, which is possibly very important
XX CC in Alzheimer's disease. The invention includes a nucleotide sequence, and a
XX CC encoding the protease, a vector containing the nucleotide sequence, and a
XX CC cell line comprising the vector. Methods for screening for inhibitors of
XX CC beta secretase activity are also given in the invention. The human
XX CC aspartase protein and nucleotide sequences and the methods for
XX CC identifying inhibitors of the protease, are useful in the treatment of
XX CC and research in to Alzheimer's disease
XX SQ Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLRSGLGAPLGL 41
DB 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 64
AAV88432
ID AAV88432 standard; protein; 459 AA.
XX AC AAV88432;
XX DT 12-SEP-2003 (revised)
XX DT 06-AUG-2003 (revised)
XX DT 03-AUG-2000 (first entry)
XX DE T7-caspase-human-pro-Asp-2(a)-deltaTM amino acid sequence.
XX KW Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;
XX KM Alzheimer's disease; beta secretase site;
XX KM T7-caspase-human-pro-Asp-2(a)-deltaTM.
XX OS Homo sapiens.
XX OS Enterobacteriaceae phage T7.
XX OS Chimeric.
XX PN W0200017369-A2.
XX PD 30-MAR-2000.
XX PF 23-SEP-1999; 99WO-US020881.
XX PF 24-SEP-1998; 98US-0101594P.
XX PR 24-SEP-1998; 98US-0101594P.
```

PA (PRAA ) PHARMACIA & UPJOHN CO.  
XX  
PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
XX  
DR WPI; 2000-303209/26.  
XX  
DR N-PSDB; AAA15669.  
XX  
PT New enzyme designated human aspartase useful in research into Alzheimer's  
PT Disease is capable of cleaving amyloid protein precursor at the beta  
PT secretase site to produce amyloid beta peptide.  
XX  
XX  
PS Example 9; Fig 7; 183pp; English.  
XX  
XX This sequence represents a modified version of the human aspartase 2  
CC (Asp2) nucleotide sequence. The sequence is used in the bacterial  
CC expression of human Asp2L. The invention relates to a protease (e.g.  
CC Asp2) capable of cleaving the beta secretase site of amyloid precursor  
CC protein (APP). The protease contains a sequence encoding the amino acid  
CC sequence DTG and a sequence encoding DSG or DTG separated by 100-300  
CC amino acids. When mutated the APP gene causes an autosomal dominant form  
CC of Alzheimer's disease. APP localises to the cell surface membrane and  
CC have a single C-terminal transmembrane domain. Proteolytic processing of  
CC APP produces the amyloid beta protein, which is possibly very important  
CC in Alzheimer's disease. The invention includes a nucleotide sequence  
CC encoding the protease, a vector containing the nucleotide sequence, and a  
CC cell line comprising the vector. Methods for screening for inhibitors of  
CC beta secretase activity are also given in the invention. The human  
CC aspartase protein and nucleotide sequences and the methods for  
CC identifying inhibitors of the protease, are useful in the treatment of  
CC and research in to Alzheimer's disease. (Updated on 06-AUG-2003 to  
CC correct OS field.) (updated on 12-SEP-2003 to standardise OS field)  
XX  
SQ Sequence 459 AA;  
XX  
Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TONGIRLPRLSGGAPLGL 41  
Db 28 TONGIRLPRLSGGAPLGL 47  
XX  
RESULT 65  
AAU07212  
ID AAU07212 standard; protein; 459 AA.  
XX  
XX AAU07212;  
AC  
XX 11-SEP-2003 (revised)  
DT 24-OCT-2001 (first entry)  
XX  
XX T7-caspase-human aspartyl protease 2a deltatm.  
XX  
XX Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;  
KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;  
KW beta-secretase; Alzheimer's disease; T7-caspase-HuAsp-2adeltatm.  
XX  
XX Homo sapiens.  
OS Enterobacteria phage T7.  
XX  
XX Key Location/Qualifiers  
FH Peptide 1..27  
FT /note="Signal peptide"  
FT Protein 28..459  
FT /note="Mature T7-caspase-aspartyl protease 2a deltatm"  
XX  
XX W0200149097-A2.  
XX  
XX 12-JUL-2001.  
XX  
XX 09-MAY-2001; 2001MO-IB000797.  
XX

PR 09-MAY-2001; 2001MO-IB000797.  
XX  
XX (BIEN/) BIENKOWSKI M J.  
PA (GURN/) GURNEY M E.  
PA (HEIN/) HEINRICHSON R L.  
PA (PARO/) PARODI L A.  
PA (YANR/) YAN R.  
XX  
PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
XX  
XX WPI; 2001-502548/55.  
DR N-PSDB; AAA11712.  
XX  
XX Novel purified polypeptide comprising fragment of mammalian aspartyl  
PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
PT activity.  
XX  
XX Example 9; Fig 7; 185pp; English.  
XX  
XX The invention relates to a novel purified polypeptide comprising a  
CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
CC and the fragment retain the beta-secretase activity of the mammalian Asp2  
CC protein. Also included is an isoform of amyloid protein precursor (APP)  
CC comprising the amino acid sequence of a APP or its fragment containing an  
CC APP cleavage site recognizable by a mammalian beta-secretase, and further  
CC comprising two lysine residues at the carboxyl terminus of the amino acid  
CC sequence of the mammalian APP or APP fragment. The polypeptides are used  
CC for assaying for modulators of beta-secretase activity; identifying  
CC agents that inhibit the APP processing activity of human Asp2 aspartyl  
CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2  
CC; and for reducing cellular production of amyloid beta (A-beta) from APP.  
CC Agents identified by the above methods are useful for treating  
CC Alzheimer's disease; and for identifying modulators of amyloid-beta  
CC (A-beta) peptide production, for use in designing therapeutics for the  
CC treatment or prevention of Alzheimer's disease. Probes and primers  
CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp  
CC nucleic acids in in vitro assays and in Northern and Southern blots. The  
CC present sequence represents the amino acid sequence of T7-caspase-human-  
CC Asp-2a delta TM construct which has a T7 tag, a caspase 8 leader sequence  
CC and lacks the transmembrane domain. This construct was used for bacterial  
CC expression and purification of human Asp2a. (Updated on 11-SEP-2003 to  
CC standardise OS field)  
XX  
SQ Sequence 459 AA;  
XX  
Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TONGIRLPRLSGGAPLGL 41  
Db 28 TONGIRLPRLSGGAPLGL 47  
XX  
RESULT 66  
AAU07216  
ID AAU07216 standard; protein; 459 AA.  
XX  
XX AAU07216;  
AC  
XX 24-OCT-2001 (first entry)  
DT  
XX  
XX Human aspartyl protease 2a deltatm (His)6.  
XX  
XX Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;  
KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;  
KW beta-secretase; Alzheimer's disease; HuAsp-2adeltatm (His)6.  
XX  
XX Homo sapiens.  
OS  
XX  
XX Key Location/Qualifiers  
FH

FT Peptide 1. .21  
 FT /note= "Signal peptide"  
 FT Protein 22. .459  
 FT /note= "Mature human aspartyl protease 2a deltaTM (His) 6"  
 FT Misc-difference 454  
 FT /note= "Encoded by cag"  
 FT Misc-difference 455  
 FT /note= "Encoded by cag"  
 FT Misc-difference 456  
 FT /note= "Encoded by cag"  
 FT Misc-difference 457  
 FT /note= "Encoded by cag"  
 FT Misc-difference 458  
 FT /note= "Encoded by cag"  
 FT Misc-difference 459  
 FT /note= "Encoded by cag"  
 FT /note= "Encoded by cag"  
 PN WO200149097-A2.  
 XX 12-JUL-2001.  
 PD  
 XX  
 XX 09-MAY-2001; 2001WO-IB000797.  
 XX  
 XX 09-MAY-2001; 2001WO-IB000797.  
 XX  
 XX  
 PA (BIEN/) BIENKOWSKI M J.  
 PA (GURN/) GURNEY M E.  
 PA (HEIN/) HEINRIKSON R L.  
 PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.  
 XX  
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 XX  
 XX WPI; 2001-502548/55.  
 DR N-PSDB; AAS11716.  
 XX  
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.  
 XX  
 XX  
 PS Claim 149; Fig 12; 185pp; English.  
 XX  
 CC The invention relates to a novel purified polypeptide comprising a  
 CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. Also included is an isoform of amyloid protein precursor (APP)  
 CC comprising the amino acid sequence of a APP or its fragment containing an  
 CC APP cleavage site recognizable by a mammalian beta-secretase, and further  
 CC comprising two lysine residues at the carboxyl terminus of the amino acid  
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used  
 CC for assaying for modulators of beta-secretase activity; identifying  
 CC agents that inhibit the APP processing activity of human Asp2 aspartyl  
 CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2  
 CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.  
 CC Agents identified by the above methods are useful for treating  
 CC Alzheimer's disease; and for identifying modulators of amyloid-beta  
 CC (Abeta) peptide production, for use in designing therapeutics for the  
 CC treatment or prevention of Alzheimer's disease. Probes and primers  
 CC derived from Asp nucleic acid sequences are useful for detecting Hu-APP  
 CC nucleic acids in in vitro assays and in Northern and Southern blots. The  
 CC present sequence represents the amino acid sequence of human Asp-2a delta  
 CC TM (His) 6 construct which has a 6 histidine tag and lacks the  
 CC transmembrane domain. This construct was used for expression and  
 CC purification of human Asp2a in insect cells  
 XX  
 SQ Sequence 459 AA:

Query Match 100.0%; Score 104; DB 1; Length 459;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 22 TONGIRLPRLSGAGAPLGL 41  
 Db 22 TONGIRLPRLSGAGAPLGL 41  
 RESULT 67  
 ID AAE10639  
 AAE10639 standard; protein; 459 AA.  
 AC  
 XX AAE10639;  
 DT 10-DEC-2001 (first entry)  
 XX  
 DE T7-Caspase-human-pro-Asp 2(a) protein lacking TM domain.  
 XX  
 KW Human; aspartyl protease 1; Asp1; amyloid precursor protein; APP;  
 KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;  
 KW amyloid plaque; neuronal loss; proteolytic; neurotropic; neuroprotective;  
 KW T7-Caspase-human-pro-Asp 2(a) protein.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 PN GB2357767-A.  
 PD 04-JUL-2001.  
 XX  
 XX 22-SEP-2000; 2000GB-00023315.  
 XX  
 XX 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99MO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 PR 06-DEC-1999; 99US-0169232P.  
 XX  
 PA (PHRA ) PHARMACIA & UPJOHN CO.  
 PI Bienkowski MJ, Gurney M;  
 XX  
 XX WPI; 2001-444208/48.  
 DR N-PSDB; AAD17875.  
 XX  
 PT Polypeptide comprising fragments of human aspartyl protease with amyloid  
 PT precursor protein processing activity and alpha-secretase activity, for  
 PT identifying modulators useful in treating Alzheimer's disease.  
 XX  
 XX Example 9; Fig 7; 187pp; English.  
 XX  
 CC The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1  
 CC proteins which lack transmembrane domain or amino terminal domain or  
 CC cytoplasmic domain and retains alpha-secretase activity and amyloid  
 CC protein precursor (APP) processing activity. The proteins of the  
 CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which  
 CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase  
 CC activity, where modulators that increase hu-Asp1 alpha-secretase activity  
 CC are useful for treating Alzheimer's disease (AD) which causes progressive  
 CC dementia with consequent formation of amyloid plaques, neurofibrillary  
 CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful  
 CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein  
 CC with the substrate under acidic conditions and determining the level of  
 CC hu-Asp1 proteolytic activity. The present sequence is human T7-Caspase-  
 CC human-pro-Asp 2(a) protein lacking a transmembrane (TM) domain. This  
 CC sequence is generated from human Asp 2(a) protein by the addition of a T7  
 CC tag and caspase 8 leader sequence at its N-terminal end and the deletion  
 CC of its C-terminal TM domain  
 XX  
 SQ Sequence 459 AA:

Query Match 100.0%; Score 104; DB 1; Length 459;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 Oy 22 TONGIRLPRLSGAGAPLGL 41

Db 28 TQHGIRLPURSGIGAPLGL 47  
|||||  
RESULT 68  
AAE10643  
ID AAE10643 standard; protein; 459 AA.  
XX  
AC AAE10643;  
XX  
DT 10-DEC-2001 (first entry)  
XX  
DE Human-Asp 2(a) protein with (His) 6 tag and lacking TM domain.  
XX  
KM Human; aspartyl protease 2a; Asp2a; amyloid precursor protein; APP;  
KM Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;  
XX amyloid plaque; neuronal loss; proteolytic; neurotropic; neuroprotective.  
OS Homo sapiens.  
OS Synthetic.  
XX  
FH Key Location/Qualifiers  
FT Peptide 1..21  
FT /label= Signal\_peptide  
FT Protein 22..459  
FT Misc-difference 214 /note= "Mature Human-Asp2(a) deltatm (His) 6 protein"  
FT /note= "Encoded by CAG"  
FT Misc-difference 454 /note= "Encoded by CAG"  
FT /note= "Encoded by CAG"  
FT Misc-difference 455 /note= "Encoded by CAG"  
FT /note= "Encoded by CAG"  
FT Misc-difference 456 /note= "Encoded by CAG"  
FT /note= "Encoded by CAG"  
FT Misc-difference 457 /note= "Encoded by CAG"  
FT /note= "Encoded by CAG"  
FT Misc-difference 458 /note= "Encoded by CAG"  
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FT Misc-difference 459 /note= "Encoded by CAG"  
FT /note= "Encoded by CAG"  
XX GB2357767-A.  
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XX  
XX 04-JUL-2001.  
XX  
XX  
XX 22-SEP-2000; 2000GB-00023315.  
XX  
XX 23-SEP-1999; 99US-00404133.  
XX 23-SEP-1999; 99US-0155493P.  
XX 23-SEP-1999; 99WO-US020881.  
XX 13-OCT-1999; 99US-00416501.  
XX 06-DEC-1999; 99US-0169232P.  
XX  
XX (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
XX Bienenkowi M J, Gurney M;  
XX  
XX WPI; 2001-444208/48.  
XX N-PSDB; AAD17879.  
XX  
XX  
XX Polypeptide comprising fragments of human aspartyl protease with amyloid  
XX precursor protein processing activity and alpha-secretase activity, for  
XX identifying modulators useful in treating Alzheimer's disease.  
XX  
XX Example 10; Fig 12; 187pp; English.  
XX  
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1  
XX proteins which lack transmembrane domain or amino terminal domain or  
XX cytoplasmic domain and retains alpha-secretase activity and amyloid  
XX protein precursor (APP) processing activity. The proteins of the  
XX invention are useful for assaying hu-Asp1 alpha-secretase activity, which  
XX in turn is useful for identifying modulators of hu-Asp1 alpha-secretase  
XX activity, where modulators that increase hu-Asp1 alpha-secretase activity

CC are useful for treating Alzheimer's disease (AD) which causes progressive  
CC dementia with consequent formation of amyloid plaques, neurofibrillary  
CC tangles, gliosis and neuronal loss. hu-Asp1 protease substrate is useful  
CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein  
CC with the substrate under acidic conditions and determining the level of  
CC hu-Asp1 proteolytic activity. The present sequence is human Asp 2(a)  
CC protein lacking a transmembrane (TM) domain and containing (His) 6  
CC sequence. This sequence is generated from human Asp 2(a) protein by the  
CC deletion of its C-terminal TM domain and addition of hexa-histidine tag  
XX at its C-terminus  
XX  
SQ Sequence 459 AA;  
XX  
Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 22 TQHGIRLPURSGIGAPLGL 41  
Db 22 TQHGIRLPURSGIGAPLGL 41  
|||||  
RESULT 69  
AAE06873  
ID AAE06873 standard; protein; 459 AA.  
XX  
AC AAE06873;  
XX  
XX 23-OCT-2001 (first entry)  
XX  
XX  
XX Human-Asp2(a) deltatm (His) 6 protein.  
XX  
XX  
XX Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;  
XX beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;  
XX neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotropic;  
XX neuroprotective; antisense therapy; Asp2(a) deltatm (His) 6 protein;  
XX gene therapy.  
XX  
XX Homo sapiens.  
OS Synthetic.  
OS  
XX  
XX  
XX Key Location/Qualifiers  
FH Region 1..22  
FT /note= "Corresponds to N-terminal Human-Asp2(a) deltatm  
FT (His) 6 protein"  
FT Peptide 22..30  
FT /label= Signal\_peptide  
FT Protein 31..459  
FT Misc-difference 214 /note= "Mature Human-Asp2(a) deltatm (His) 6 protein"  
FT /note= "Encoded by CAG"  
FT Misc-difference 254 /note= "Encoded by CAG"  
FT /note= "Encoded by CAG"  
FT Misc-difference 255 /note= "Encoded by CAG"  
FT /note= "Encoded by CAG"  
FT Misc-difference 256 /note= "Encoded by CAG"  
FT /note= "Encoded by CAG"  
FT Misc-difference 257 /note= "Encoded by CAG"  
FT /note= "Encoded by CAG"  
FT Misc-difference 258 /note= "Encoded by CAG"  
FT /note= "Encoded by CAG"  
FT Misc-difference 259 /note= "Encoded by CAG"  
FT /note= "Encoded by CAG"  
XX  
XX W0200150829-A2.  
XX  
XX 19-JUL-2001.  
XX  
XX 09-MAY-2001; 2001WO-IB000799.  
XX  
XX 09-MAY-2001; 2001WO-IB000799.  
XX  
XX (BIEN/) BIENKOWSKI M J.  
PA

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PA (GURN/) GURNEY M E.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-483072/52.
DR N-PSDB; AAD13035.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.
XX
XX Claim 149; Fig 12; 185pp; English.
XX
XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
CC precursor protein (APP) isoforms and their corresponding DNA molecules.
CC Human aspartyl proteases can act as beta-secretase proteases useful for
CC treating Alzheimer's disease. APP isoforms are useful for identifying
CC modulators of amyloid-beta peptide production, for use in designing
CC therapeutics for the treatment and prevention of Alzheimer's disease,
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
CC and neuronal loss. APP isoforms are also used in methods for identifying
CC inhibitors and modulators of human Asp2 activity. The invention relates
CC to a method for identifying agents that modulate the activity of human
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
CC as a means to screen in cellular assays for the inhibitors of beta- and
CC gamma- secretase. Hu-APP DNA fragments are useful as probes or primers in
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
CC APP nucleic acids in vitro assays and in Northern and Southern blots.
CC The present sequence is Human aspartyl protease 2a (Hu-Asp2a) deltaTM
CC (His)6 protein which is obtained by deletion of C-terminal transmembrane
CC domain and addition of a hexa-Histidine tag at the C-terminal end of Hu-
CC Asp2a. Human Asp2a has beta-secretase activity
XX
SQ Sequence 459 AA;
Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
OY 22 TQHGIRLPRLSGAGAPLGL 41
Db 22 TQHGIRLPRLSGAGAPLGL 41

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RESULT 70
AAE06869
ID AAE06869 standard; protein; 459 AA.
XX
XX AAE06869;
AC
XX
XX 23-OCT-2001 (first entry)
DE
XX T7-Caspase-Human-pro-Asp2(a) deltaTM protein.
XX
XX Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
XX beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
XX neurofibrillary tangle; neuronal loss; amyloid-beta peptide; noctropic;
XX neuroprotective; antisense therapy; caspase-pro-Asp2(a) deltaTM protein;
XX gene therapy.
XX
XX Homo sapiens.
XX OS Synthetic.
XX
XX MO200150829-A2.
XX
XX 19-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-1B000799.
XX

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PR 09-MAY-2001; 2001WO-1B000799.
XX
XX (BIEN/) BIENKOWSKI M J.
XX
XX (GURN/) GURNEY M E.
XX
XX (HEIN/) HEINRIKSON R L.
XX
XX (PARO/) PARODI L A.
XX
XX (YANR/) YAN R.
PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-483072/52.
DR N-PSDB; AAD13031.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.
XX
XX Example 9; Fig 7; 185pp; English.
XX
XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
CC precursor protein (APP) isoforms and their corresponding DNA molecules.
CC Human aspartyl proteases can act as beta-secretase proteases useful for
CC treating Alzheimer's disease. APP isoforms are useful for identifying
CC modulators of amyloid-beta peptide production, for use in designing
CC therapeutics for the treatment and prevention of Alzheimer's disease,
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
CC and neuronal loss. APP isoforms are also used in methods for identifying
CC inhibitors and modulators of human Asp2 activity. The invention relates
CC to a method for identifying agents that modulate the activity of human
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
CC as a means to screen in cellular assays for the inhibitors of beta- and
CC gamma- secretase. Hu-APP DNA fragments are useful as probes or primers in
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
CC APP nucleic acids in vitro assays and in Northern and Southern blots.
CC The present sequence is T7-Caspase-Human-pro-aspartyl protease 2a (Asp2a)
CC deltaTM protein which is obtained by the addition of T7 tag and caspase 8
CC leader sequence at the N-terminal end and deletion of the transmembrane
CC domain at the C-terminal end of Hu-Asp2a. Human Asp2a has beta-secretase
CC activity
XX
SQ Sequence 459 AA;
Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
OY 22 TQHGIRLPRLSGAGAPLGL 41
Db 28 TQHGIRLPRLSGAGAPLGL 47

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RESULT 71
AAE02591
ID AAE02591 standard; protein; 459 AA.
XX
XX AAE02591;
AC
XX
XX 10-AUG-2001 (first entry)
DE
XX T7-Caspase-human-pro-Asp-2(a) delta TM protein.
XX
XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;
XX Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp2a;
XX beta-secretase; caspase-Asp-2a delta TM.
XX
XX Homo sapiens.
XX OS Synthetic.
XX
XX MO200123533-A2.
XX
XX 05-APR-2001.
XX

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PF 22-SEP-2000; 2000MO-US020600.
XX
PR 23-SEP-1999; 99US-015493P.
PR 23-SEP-1999; 99MO-US020801.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
XX
PA (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI Gurney M, Bienkowski MJ;
XX
DR WPI; 2001-290516/30.
DR N-PSDB; AAD06749.
XX
PT Enzymes that cleave the alpha-secretase site of the amyloid precursor
PT protein, useful for the treatment of Alzheimer's disease.
XX
PS Example 9; Fig 7; 1899P; English.
XX
CC The present invention relates to enzymes for cleaving the alpha-
CC secretase site of the amyloid precursor protein (APP) and methods of
CC identifying those enzymes. The methods may be used to identify enzymes
CC that may be used to cleave the alpha-secretase cleavage site of the APP
CC protein. The enzymes may be used to treat or modulate the progress of
CC Alzheimer's disease. The present sequence is human Asp217 protease 2a
CC (Asp-2a) caspase delatm protein which is obtained by deleting the
CC transmembrane domain and adding a T7-caspase leader sequence at the N-
CC terminal end. This sequence has beta-secretase protease activity
XX
SQ Sequence 459 AA;
XX
Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGLGAPLGL 41
Db 28 TQHGIRLPRLRSGLGAPLGL 47
XX
RESULT 72
AAE02595 ID AAE02595 standard; protein; 459 AA.
XX
AC AAE02595;
XX
D7 10-AUG-2001 (first entry)
XX
DE Human-Asp-2(a) delatm (His) 6 protein.
XX
KW Human; alpha-secretase; amyloid precursor protein; APP; therapy;
KW Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a;
KW beta-secretase; Asp-2a delta TM; histidine tag; mutant; mutein.
XX
OS Homo sapiens.
OS Synthetic.
XX
XX Key Location/Qualifiers
XX FH Misc-difference 214
XX FT /note= "Encoded by CAC"
XX FT Misc-difference 454
XX FT /note= "Encoded by CAG"
XX FT Misc-difference 455
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XX FT Misc-difference 456
XX FT /note= "Encoded by CAG"
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XX FT /note= "Encoded by CAG"
XX FT Misc-difference 459
XX FT /note= "Encoded by CAG"
XX FT /note= "Encoded by CAG"
XX

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[illegible]





XX Sequence 459 AA;  
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Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

22 TQHGIRLPNLSGIGAPLGL 41  
Db 28 TQHGIRLPNLSGIGAPLGL 47

RESULT 75  
ID ABB78600 standard; protein; 459 AA.  
XX  
AC ABB78600;  
XX  
DT 16-JUL-2002 (first entry)  
XX  
DE 17-caspase-human-pro-Asp-2(a)delatm protein sequence SEQ ID NO:24.  
XX  
KM Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;  
XX amyloid precursor protein; App.  
OS Homo sapiens.  
XX  
PN GB2367060-A.  
XX  
PD 27-MAR-2002.  
XX  
PF 29-OCT-2001; 2001GB-00025934.  
XX  
PR 23-SEP-1999; 99US-00404133.  
XX 23-SEP-1999; 99US-0155493P.  
PR 23-SEP-1999; 99WO-US020881.  
XX 13-OCT-1999; 99US-00416901.  
PR 06-DEC-1999; 99US-0169232P.  
XX 22-SEP-2000; 2000GB-00023315.  
XX  
PA (PHMA ) PHARMACIA & UPJOHN CO.  
XX  
PI Bienkowskei MJ, Gurney M;  
XX  
DR WPI; 2002-397167/43.  
XX N-PSDB; ABL52467.  
XX  
DR

Human aspartyl protease 1 substrates useful in assays to detect aspartyl protease activity, e.g. for the diagnosis of Alzheimer's disease.

Example 9; Fig 7; 182pp; English.

The present invention describes a human aspartyl protease 1 (hu-Asp1) substrate (I) which comprises a peptide of no more than 50 amino acids, and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1 proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with (1) under acidic conditions; and (b) determining the level of hu-Asp1 proteolytic activity; (2) a purified polynucleotide (III) comprising a nucleotide sequence that hybridises under stringent conditions to the non-coding strand complementary to a defined 1804 nucleotide sequence (see ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1 proteolytic activity and lacks nucleotides encoding a transmembrane domain; (3) a purified polynucleotide (III') comprising a sequence that hybridises under stringent conditions to (III) (the nucleotide sequence encodes a polypeptide further lacking a pro-peptide domain corresponding to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV) comprising (III) or (III'); and (5) a host cell (V) transformed or transfected with (III), (III'), and/or (IV). The hu-Asp1 protease substrate (I) may be used as an enzyme substrate in assays to detect aspartyl protease activity, (II) and therefore diagnose diseases associated with aberrant hu-Asp1 expression and activity such as Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while

CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
CC sequence represents human T7-caspase-human-pro-Asp-2(a)delatm, which is  
CC given in an example from the present invention  
XX

SQ Sequence 459 AA;  
Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

22 TQHGIRLPNLSGIGAPLGL 41  
Db 28 TQHGIRLPNLSGIGAPLGL 47

RESULT 76  
ID ABB78604 standard; protein; 459 AA.  
XX  
AC ABB78604;  
XX  
DT 16-JUL-2002 (first entry)  
XX  
DE Human Asp-2(a)delatm(His)6 protein sequence SEQ ID NO:32.  
XX  
KM Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;  
XX Chromosome 11q23.3-24.1.  
XX  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT Misc-difference 214 /note= "encoded by CAC"  
FT Misc-difference 454 /note= "encoded by CAG"  
FT Misc-difference 455 /note= "encoded by CAG"  
FT Misc-difference 456 /note= "encoded by CAG"  
FT Misc-difference 457 /note= "encoded by CAG"  
FT Misc-difference 458 /note= "encoded by CAG"  
FT Misc-difference 459 /note= "encoded by CAG"  
FT Misc-difference 459 /note= "encoded by CAG"  
XX  
PN GB2367060-A.  
XX  
PD 27-MAR-2002.  
XX  
PF 29-OCT-2001; 2001GB-00025934.  
XX  
PR 23-SEP-1999; 99US-00404133.  
XX 23-SEP-1999; 99US-0155493P.  
PR 23-SEP-1999; 99WO-US020881.  
XX 13-OCT-1999; 99US-00416901.  
PR 06-DEC-1999; 99US-0169232P.  
XX 22-SEP-2000; 2000GB-00023315.  
XX  
PA (PHMA ) PHARMACIA & UPJOHN CO.  
XX  
PI Bienkowskei MJ, Gurney M;  
XX  
DR WPI; 2002-397167/43.  
XX N-PSDB; ABL52471.  
XX  
DR

Human aspartyl protease 1 substrates useful in assays to detect aspartyl protease activity, e.g. for the diagnosis of Alzheimer's disease.

Example 10; Fig 12; 182pp; English.

The present invention describes a human aspartyl protease 1 (hu-Asp1) substrate (I) which comprises a peptide of no more than 50 amino acids,

CC and which comprises the 8 amino acid sequence Gly-Ileu-Ala-Ileu-Ala-Ileu-  
CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
CC (1) under acidic conditions; and (b) determining the level of hu-Asp1  
CC proteolytic activity; (2) a purified polynucleotide (III) comprising a  
CC nucleotide sequence that hybridizes under stringent conditions to the non  
CC coding strand complementary to a defined 1804 nucleotide sequence (see  
CC AB52456) where the nucleotide sequence encodes a polypeptide having Asp1  
CC proteolytic activity and lacks nucleotides encoding a transmembrane  
CC domain; (3) a purified polynucleotide (III') comprising a sequence that  
CC hybridizes under stringent conditions to (III) (the nucleotide sequence  
CC encodes a polypeptide further lacking a pro-peptide domain corresponding  
CC to amino acids 23-62 of hu-Asp1 (see AB878589)); (4) a vector (IV)  
CC comprising (III) or (III'); and (5) a host cell (V) transformed or  
CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease  
CC substrate (I) may be used as an enzyme substrate in assays to detect  
CC aspartyl1 protease activity, (II) and therefore diagnose diseases  
CC associated with aberrant hu-Asp1 expression and activity such as  
CC Alzheimer's disease. Hu-Asp1 has been localized to chromosome 21, while  
CC hu-Asp2 has been localized to chromosome 11q23.3-24.1. The present  
CC sequence represents human Asp-2(a)deltaTM(His)6, which is given in an  
CC example from the present invention  
SQ Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPNRSGLGAPLGL 41  
Db 22 TQHGIRLPNRSGLGAPLGL 41

RESULT 77  
ID ADC81579 standard; protein; 459 AA.  
AC ADC81579;  
XX  
DT 01-JAN-2004 (first entry)  
XX  
DE BACE construct Asp2-2L-TM-His6 amino acid sequence SEQ ID NO:24.  
XX  
XX human; BACE; modification; Pro33lys; pro-enzyme.  
XX  
OS Synthetic.  
OS Homo sapiens.  
XX  
PN WO2003072733-A2.  
XX  
PD 04-SEP-2003.  
XX  
PF 21-FEB-2003; 2003WO-US005508.  
XX  
PR 21-FEB-2002; 2002US-0358651P.  
XX  
PA (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
PI Chou K, Howe JW;  
XX  
DR WPI; 2003-712719/67.  
XX  
XX BACE polypeptides having Pro33lys modification, useful in determining  
PT possible mutations, which will inhibit enzyme activity, and in  
PT determining potential active site for target molecules.  
XX  
PS Example 4; SEQ ID NO 24; 38bp; English.  
XX  
XX The present invention describes an isolated polypeptide (I) comprising or  
CC consisting of a fully defined sequence of 432 amino acids (see ADC81561),  
CC and comprising human BACE having the modification Pro33lys. Also  
CC described: (1) a composition comprising an active human BACE enzyme

CC comprising the pro-enzyme sequence of BACE having the modification  
CC Pro33lys; (2) an isolated polynucleotide comprising a sequence encoding  
CC (1); (3) an isolated polynucleotide consisting or comprising of  
CC nucleotides 70-1365 of a 1355-bp sequence (see ADC81562); (4) an  
CC expression vector comprising the polynucleotide of (2), or a  
CC polynucleotide sequence encoding a Pro33lys-BACE polypeptide, where the  
CC expression vector can produce the Pro33lys-BACE polypeptide when present  
CC in a compatible host cell, when cultured under conditions that allow  
CC production; (5) a recombinant host cell comprising the expression vector;  
CC and (6) producing a (active) Pro33lys-BACE polypeptide. The BACE  
CC polypeptide having Pro33lys modification may be used in determining  
CC possible mutations, which will inhibit enzyme activity, and in  
CC determining potential active site for target molecules. The vector  
CC comprising the BACE polynucleotide is useful for producing recombinant  
CC BACE polypeptides having Pro33lys modification. The present sequence  
CC represents a BACE construct Asp2-2L-TM-His6 amino acid sequence, which is  
CC used in an example from the present invention.  
SQ Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPNRSGLGAPLGL 41  
Db 22 TQHGIRLPNRSGLGAPLGL 41

RESULT 78  
ID ADJ94344 standard; protein; 459 AA.  
AC ADJ94344;  
XX  
DT 03-JUN-2004 (first entry)  
XX  
DE Human-pro-Asp-2(a)deltaTM(His)6.  
XX  
XX Human; enzyme; aspartyl1 protease; Asp-1; Asp-2(a); Asp-2(b);  
KW beta secretase; amyloid protein precursor; APP; Alzheimer's disease;  
KW neurotropic; neuroprotective; amyloid beta; mutant; mutuin.  
XX  
OS Homo sapiens.  
OS Synthetic.  
XX  
PN US6706485-B1.  
XX  
PD 16-MAR-2004.  
XX  
PF 12-APR-2000; 2000US-00548376.  
XX  
PR 24-SEP-1998; 98US-0101594P.  
XX  
PR 23-SEP-1999; 99US-00404133.  
XX  
PR 23-SEP-1999; 99US-0155493P.  
XX  
PR 23-SEP-1999; 99WO-US020881.  
XX  
PR 13-OCT-1999; 99US-00416901.  
XX  
PA (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;  
XX  
DR WPI; 2004-236722/22.  
XX  
XX Identifying agents that modulate activity of Asp2 aspartyl1 protease  
PT useful for treating or preventing Alzheimer's disease involves comparing  
PT APP processing activity of protease in presence and absence of test  
PT agent.  
XX  
PS Example 10; SEQ ID NO 32; 109bp; English.  
XX  
XX The invention relates to identifying agents that modulate activity of

CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 CC precursor protein (APP) in the presence and absence of a test agent,  
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated  
 CC antibody that specifically binds to Hu-Asp polypeptide, an isolated  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy terminus amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW  
 CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the activity  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease. Preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence represents an aspartyl protease  
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a  
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2  
 CC protein.  
 CC  
 SQ Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPVGL 41  
 ||||||||||||||||  
 DB 22 TQHGIRLPLRSGLGAPVGL 41

RESULT 79  
 ADJ94336

ID ADJ94336 standard; protein; 459 AA.

AC ADJ94336;

DT 03-JUN-2004 (first entry)

DE Human T7-Caspase-human-pro-Asp-2(a)deltaTM.

KM Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KW beta secretase; amyloid protein precursor; APP; Alzheimer's disease;  
 KW neurotrophic; neuroprotective; amyloid beta; mutant; muteln.

OS Homo sapiens.

OS Synthetic.

PN US6706485-B1.

PD 16-MAR-2004.

PF 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 98US-0155483P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA ) PHARMACIA & UPJOHN CO.

PA Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

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DR WP1; 2004-236722/22.

DR N-PSDB; ADJ94335.

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Example 9; SEQ ID NO 24; 109pp; English.

The invention relates to identifying agents that modulate activity of  
 Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 precursor protein (APP) in the presence and absence of a test agent,  
 where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 beta, determining APP processing activity of Asp2 in presence and absence  
 of the test agent, and comparing the activities to identify agents that  
 modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 the vector and the method of producing Hu-Asp polypeptide, an isolated  
 antibody that specifically binds to Hu-Asp polypeptide, an isolated  
 cell that can be used to screen for inhibitors of beta secretase  
 activity, novel isoforms of amyloid protein precursor (APP), where the  
 last 2 carboxy terminus amino acids of that isoform are both lysine  
 residues (e.g. those designated APP695-KK or carrying the Swedish  
 mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW  
 CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the activity  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease. Preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence represents an aspartyl protease  
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a  
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2  
 CC protein.  
 CC  
 SQ Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPVGL 41  
 ||||||||||||||||  
 DB 28 TQHGIRLPLRSGLGAPVGL 47

RESULT 80  
 ADO50432

ID ADO50432 standard; protein; 459 AA.

AC ADO50432;

DT 29-JUL-2004 (first entry)

DE T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric protein.

KM Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;  
 KW Alzheimer's disease; gene therapy; human; chimeric; caspase.

OS Homo sapiens.

OS Chimeric.

OS Unidentified.

XX US6737510-B1.

PN 18-MAY-2004.

PD 12-APR-2000; 2000US-00548373.

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XX 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
XX
PA (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX
DR N-PSDB; ADO50431.
XX
PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
PT involved in processing amyloid precursor protein into amyloid beta,
PT useful in preparing a composition for treating or preventing Alzheimer's
PT disease.
XX
PS Example 9; SEQ ID NO 24; 108pp; English.
XX
CC The invention relates to a method for identifying an agent that decreases
CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
CC provides enzyme and enzymatic procedures for cleaving the beta secretase
CC cleavage site of the amyloid precursor protein (APP). The invention is
CC useful in preparing a composition for treating or preventing Alzheimer's
CC disease. It is also useful in gene therapy. The present sequence is 77-
CC Caspase-human-pro-Asp-2(a)deltaTM chimeric protein. This sequence is used
CC to illustrate the method of the invention.
XX
SQ Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGLGAPLGL 41
DB 28 TONGIRLPLRSGLGAPLGL 47

RESULT 81
ADO50440
ID ADO50440 standard; protein; 459 AA.
XX
AC ADO50440;
XX
DT 29-JUL-2004 (first entry)
XX
DE Human Asp-2(a)deltaTM(His)6 protein.
XX
KW Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
KW Alzheimer's disease; gene therapy; human.
XX
OS Homo sapiens.
OS Synthetic.
XX
PH Key Location/Qualifiers
FT Misc-difference 214
FT Misc-difference /note= "Encoded by CAC"
FT Misc-difference 454
FT Misc-difference /note= "Encoded by CAG"
FT Misc-difference 455
FT Misc-difference /note= "Encoded by CAG"
FT Misc-difference 456
FT Misc-difference /note= "Encoded by CAG"
FT Misc-difference 457
FT Misc-difference /note= "Encoded by CAG"
FT Misc-difference 458
FT Misc-difference /note= "Encoded by CAG"
FT Misc-difference 459
FT Misc-difference /note= "Encoded by CAG"
XX
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FN US6737510-B1.
XX
XX 18-MAY-2004.
XX
PF 12-APR-2000; 2000US-00548373.
XX
PR 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
XX
PA (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX
DR N-PSDB; ADO50439.
XX
PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
PT involved in processing amyloid precursor protein into amyloid beta,
PT useful in preparing a composition for treating or preventing Alzheimer's
PT disease.
XX
PS Example 10; SEQ ID NO 32; 108pp; English.
XX
CC The invention relates to a method for identifying an agent that decreases
CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
CC provides enzyme and enzymatic procedures for cleaving the beta secretase
CC cleavage site of the amyloid precursor protein (APP). The invention is
CC useful in preparing a composition for treating or preventing Alzheimer's
CC disease. It is also useful in gene therapy. The present sequence is human
CC Asp-2(a)deltaTM(His)6 protein. This sequence is used to illustrate the
CC method of the invention.
XX
SQ Sequence 459 AA;

Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGLGAPLGL 41
DB 22 TONGIRLPLRSGLGAPLGL 41

RESULT 82
ADR75345
ID ADR75345 standard; protein; 459 AA.
XX
AC ADR75345;
XX
DT 18-NOV-2004 (first entry)
XX
DE T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric protein.
XX
KW Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
KW chromosome identification; Alzheimer's disease; human; caspase; chimeric.
XX
OS Homo sapiens.
OS Chimeric.
OS Unidentified.
XX
PN US2004166507-A1.
XX
PD 26-AUG-2004.
XX
PF 29-AUG-2003; 2003US-00652045.
XX
PR 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 13-OCT-1999; 99US-00416901.
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XX (GURN/) GURNEY M E.
PA (BIEN/) BIENKOWAKI M J.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
PI Gurney ME, Bienkowiak MJ, Heinrichson RL, Parodi LA, Yan R,
XX WPI: 2004-624916/60.
DR N-PSDB; ADR75344.
PT Novel purified/isolated polynucleotide encoding polypeptide having
PT aspartyl protease activity involved in processing amyloid precursor
PT protein into amyloid beta, useful in identifying agent decreasing
PT activity of aspartyl protease.
XX
XX Example 9; SEQ ID NO 24; 107pp; English.
PS The invention relates to nucleic acid sequences encoding aspartyl
CC protease (Asp) polypeptides having aspartyl protease activity involved in
CC processing amyloid precursor protein (APP) into amyloid beta. The
CC invention also relates to a method for identifying an agent that
CC decreases the protease activity of the Asp. Asp DNA is useful in
CC chromosome identification as they can hybridize with a specific location
CC on a human chromosome and in identifying the relationship between genes
CC and diseases (particular gene responsible for causing diseases). It is
CC also useful for identifying candidates to modulate the progression of
CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The
CC present sequence is the human T7-Caspase-Human-pro-Asp-2(a)deltaTM
CC chimeric protein. This sequence is used to illustrate the method of the
CC invention.
XX
SQ Sequence 459 AA;
Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGLGAPVLG 41
DB 28 TQHGIRLPRLRSGLGAPVLG 47
RESULT 83
ADR75353
ID ADR75353 standard; protein; 459 AA.
XX
AC ADR75353;
XX
DT 18-NOV-2004 (first entry)
XX
DE Human Asp-2(a)deltaTM(His)6 protein.
XX
KW Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
KW chromosome identification; Alzheimer's disease; human.
XX
OS Homo sapiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Misc-difference 214 /note= "Encoded by CAC"
FT Misc-difference 454 /note= "Encoded by CAG"
FT Misc-difference 455 /note= "Encoded by CAG"
FT Misc-difference 456 /note= "Encoded by CAG"
FT Misc-difference 457 /note= "Encoded by CAG"
FT Misc-difference 458 /note= "Encoded by CAG"
FT Misc-difference 459

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FT /note= "Encoded by CAG"
FT Misc-difference 459 /note= "Encoded by CAG"
FT
XX US2004166507-A1.
XX
XX 26-AUG-2004.
XX
XX 29-AUG-2003; 2003US-00652045.
XX
XX 24-SEP-1998; 98US-0101594P.
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 13-OCT-1999; 99US-00416901.
XX
XX (GURN/) GURNEY M E.
PA (BIEN/) BIENKOWAKI M J.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
PI Gurney ME, Bienkowiak MJ, Heinrichson RL, Parodi LA, Yan R;
XX WPI: 2004-624916/60.
DR N-PSDB; ADR75352.
XX
XX Example 10; SEQ ID NO 32; 107pp; English.
PS The invention relates to nucleic acid sequences encoding aspartyl
CC protease (Asp) polypeptides having aspartyl protease activity involved in
CC processing amyloid precursor protein (APP) into amyloid beta. The
CC invention also relates to a method for identifying an agent that
CC decreases the protease activity of the Asp. Asp DNA is useful in
CC chromosome identification as they can hybridize with a specific location
CC on a human chromosome and in identifying the relationship between genes
CC and diseases (particular gene responsible for causing diseases). It is
CC also useful for identifying candidates to modulate the progression of
CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The
CC present sequence is the human Asp-2(a)deltaTM(His)6 protein. This
CC sequence is used to illustrate the method of the invention.
XX
XX Sequence 459 AA;
Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPRLRSGLGAPVLG 41
DB 22 TQHGIRLPRLRSGLGAPVLG 41
RESULT 84
AAB07898
ID AAB07898 standard; protein; 460 AA.
XX
AC AAB07898;
XX
DT 14-NOV-2000 (first entry)
XX
DE Amino acid sequence of a human beta-secretase enzyme fragment.
XX
KW Beta-secretase; beta-amyloid precursor protein; beta-amyloid peptide;
KW amyloid plaque component; Alzheimer's disease; amyloidogenic disease;
KW inhibitor.
XX
OS Homo sapiens.

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XX XX MO200047618-A2.  
XX PN  
XX PD 17-AUG-2000.  
XX PF 10-FEB-2000; 2000WO-US003819.  
XX PR 10-FEB-1999; 99US-0119571P.  
XX PR 15-JUN-1999; 99US-0139172P.  
XX PA (ELAN-) ELAN PHARM INC.  
XX PI Anderson JP, Basi G, Doane MT, Frigon N, John V, Power M;  
XX PI Sinha S, Tatsuno G, Tung J, Wang S, Mcconlogue L;  
XX DR WPI; 2000-533011/48.  
XX PT Purified beta-secretase protein used in assays to discover inhibitors  
XX PT which can be used for the treatment of amyloidogenic diseases e.g.  
XX PT Alzheimer's disease.  
XX PS Claim 55; Fig 3A; 121pp; English.  
XX CC The specification describes a beta-secretase enzyme. The enzyme cleaves  
XX CC beta-amyloid precursor protein to produce beta-amyloid peptide. This  
XX CC enzyme is therefore implicated in the production of amyloid plaque  
XX CC components which accumulate in the brains of individuals afflicted with  
XX CC Alzheimer's disease. Inhibitors of beta-secretase are administered to a  
XX CC mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-  
XX CC like pathology to test if they maintain or improve cognitive ability or  
XX CC reduce the plaque burden. The compounds are used for the treatment of  
XX CC amyloidogenic diseases e.g. Alzheimer's disease. The present sequence  
XX CC represents a human beta-secretase enzyme fragment  
XX SQ Sequence 460 AA;  
SQ  
Query Match 100.0%; Score 104; DB 1; Length 460;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TONGIRLPLRSGLGAPLGL 41  
Db 22 TONGIRLPLRSGLGAPLGL 41  
RESULT 85  
ADJ57789 standard; protein; 460 AA.  
XX ID ADJ57789  
XX AC ADJ57789;  
XX DT 06-MAY-2004 (first entry)  
XX DE BACE N-Q R57KDEL protein.  
XX DE BACE N-Q R57KDEL protein.  
XX KM beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;  
XX KM Alzheimer's disease.  
XX OS Synthetic.  
XX PN WO2004011641-A2.  
XX PD 05-FEB-2004.  
XX PF 25-JUL-2003; 2003WO-GB003200.  
XX PR 26-JUL-2002; 2002US-0398681P.  
XX PA (ASTE-) ASTEX TECHNOLOGY LTD.  
XX PI Vuillard LM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;  
XX DR WPI; 2004-169242/16.

DR N-PSDB; ADJ57788.  
XX XX  
XX PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
XX PT preventing Alzheimer's disease or Alzheimer's-t-type pathology of Down's  
XX PT syndrome.  
XX PS Claim 10; SEQ ID NO 18; 145pp; English.  
XX CC The present invention relates to a beta site APP cleaving enzyme (BACE)  
XX CC protein. The compound or the composition is useful in medicine and the  
XX CC BACE crystal structure is useful for drug discovery. The BACE protein,  
XX CC compounds, pharmaceutical compositions, medicament, drug or other  
XX CC composition comprising the compound is useful for treating or preventing  
XX CC Alzheimer's disease or Alzheimer's-t-type pathology of Down's syndrome. The  
XX CC present sequence represents the DNA sequence for a BACE protein.  
XX SQ Sequence 460 AA;  
SQ  
Query Match 100.0%; Score 104; DB 1; Length 460;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TONGIRLPLRSGLGAPLGL 41  
Db 24 TONGIRLPLRSGLGAPLGL 43  
RESULT 86  
ADJ57787 standard; protein; 461 AA.  
XX ID ADJ57787  
XX AC ADJ57787;  
XX DT 06-MAY-2004 (first entry)  
XX DE BACE N-Q R57K protein.  
XX DE BACE N-Q R57K protein.  
XX KM beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;  
XX KM Alzheimer's disease.  
XX OS Synthetic.  
XX PN WO2004011641-A2.  
XX PD 05-FEB-2004.  
XX PF 25-JUL-2003; 2003WO-GB003200.  
XX PR 26-JUL-2002; 2002US-0398681P.  
XX PA (ASTE-) ASTEX TECHNOLOGY LTD.  
XX PI Vuillard LM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;  
XX DR WPI; 2004-169242/16.  
XX DR N-PSDB; ADJ57786.  
XX PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
XX PT preventing Alzheimer's disease or Alzheimer's-t-type pathology of Down's  
XX PT syndrome.  
XX PS Claim 10; SEQ ID NO 16; 145pp; English.  
XX CC The present invention relates to a beta site APP cleaving enzyme (BACE)  
XX CC protein. The compound or the composition is useful in medicine and the  
XX CC BACE crystal structure is useful for drug discovery. The BACE protein,  
XX CC compounds, pharmaceutical compositions, medicament, drug or other  
XX CC composition comprising the compound is useful for treating or preventing  
XX CC Alzheimer's disease or Alzheimer's-t-type pathology of Down's syndrome. The  
XX CC present sequence represents the DNA sequence for a BACE protein.  
XX SQ Sequence 461 AA;



Query Match 100.0%; Score 104; DB 1; Length 461;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGLGAPLGL 41  
DB 24 TQHGIRLPURSGLGAPLGL 43

## RESULT 87

ADJ57775  
ID ADJ57775 standard; protein; 461 AA.

AC ADJ57775;

DT 06-MAY-2004 (first entry)

DE BACE N-Q protein.

KW beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;  
KW Alzheimer's disease.

OS Synthetic.

PN WO2004011641-A2.

PD 05-FEB-2004.

PF 25-JUL-2003; 2003WO-GB003200.

PR 26-JUL-2002; 2002US-0398681P.

PA (ASTE-) ASTEX TECHNOLOGY LTD.

PI Vuillard LM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

DR WPI; 2004-169242/16.

DR N-PSDB; ADJ57774.

PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
preventing Alzheimer's disease or Alzheimer's-type pathology of Down's  
syndrome.

PS Disclosure; SEQ ID NO 4; 145pp; English.

CC The present invention relates to a beta site APP cleaving enzyme (BACE)  
protein. The compound or the composition is useful in medicine and the  
BACE crystal structure is useful for drug discovery. The BACE protein,  
CC compounds, pharmaceutical compositions, medicament, drug or other  
composition comprising the compound is useful for treating or preventing  
Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The  
CC present sequence represents the DNA sequence for a BACE protein.

XX Sequence 461 AA;

Query Match 100.0%; Score 104; DB 1; Length 461;  
Best Local Similarity 100.0%; Pred. No. 33;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGLGAPLGL 41  
DB 24 TQHGIRLPURSGLGAPLGL 43

## RESULT 88

ADJ57783  
ID ADJ57783 standard; protein; 461 AA.

AC ADJ57783;

DT 06-MAY-2004 (first entry)

DE BACE N-Q R56K57K protein.

XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;  
KW Alzheimer's disease.

OS Synthetic.

PN WO2004011641-A2.

PD 05-FEB-2004.

PF 25-JUL-2003; 2003WO-GB003200.

PR 26-JUL-2002; 2002US-0398681P.

PA (ASTE-) ASTEX TECHNOLOGY LTD.

PI Vuillard LM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

DR WPI; 2004-169242/16.

DR N-PSDB; ADJ57782.

PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
preventing Alzheimer's disease or Alzheimer's-type pathology of Down's  
syndrome.

PS Claim 10; SEQ ID NO 12; 145pp; English.

CC The present invention relates to a beta site APP cleaving enzyme (BACE)  
protein. The compound or the composition is useful in medicine and the  
BACE crystal structure is useful for drug discovery. The BACE protein,  
CC compounds, pharmaceutical compositions, medicament, drug or other  
composition comprising the compound is useful for treating or preventing  
Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The  
CC present sequence represents the DNA sequence for a BACE protein.

XX Sequence 461 AA;

Query Match 100.0%; Score 104; DB 1; Length 461;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGLGAPLGL 41  
DB 24 TQHGIRLPURSGLGAPLGL 43

## RESULT 89

AAV88426  
ID AAV88426 standard; protein; 476 AA.

AC AAV88426;

DT 03-AUG-2000 (first entry)

DE Human aspartyl protease 2 (b) (Asp2) amino acid sequence.

KW Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;  
KW Alzheimer's disease; beta secretase site.

OS Homo sapiens.

PN WO200017369-A2.

PD 30-MAR-2000.

PF 23-SEP-1999; 99WO-US020881.

PR 24-SEP-1998; 98US-0101594P.

PA (PHAA ) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

DR WPI: 2000-303209/26.  
 DR N-PSDB; AAA15663.  
 PT New enzyme designated human aspartase useful in research into Alzheimer's  
 PT Disease is capable of cleaving amyloid protein precursor at the beta  
 PT secretase site to produce amyloid beta peptide.  
 XX  
 PS Claim 51; Fig 3; 183pp; English.  
 XX  
 CC This sequence represents the human aspartyl protease 2 (Asp2) amino acid  
 CC sequence. The invention relates to a protease (e.g. Asp2) capable of  
 CC cleaving the beta secretase site of amyloid precursor protein (APP). The  
 CC protease contains a sequence encoding the amino acid sequence DTG and a  
 CC sequence encoding DSG or DTG separated by 100-300 amino acids. When  
 CC mutated the APP gene causes an autosomal dominant form of Alzheimer's  
 CC disease. APP localises to the cell surface membrane and have a single C-  
 CC terminal transmembrane domain. Proteolytic processing of APP produces the  
 CC amyloid beta protein, which is possibly very important in Alzheimer's  
 CC disease. The invention includes a nucleotide sequence encoding the  
 CC protease, a vector containing the nucleotide sequence, and a cell line  
 CC comprising the vector. Methods for screening for inhibitors of beta  
 CC secretase activity are also given in the invention. The human aspartase  
 CC protein and nucleotide sequences and the methods for identifying  
 CC inhibitors of the protease, are useful in the treatment of and research  
 CC in to Alzheimer's disease  
 XX  
 SQ Sequence 476 AA;  
 Query Match 100.0%; Score 104; DB 1; Length 476;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 22 TQHGIRLPNSGCGAPLGL 41  
 Db 22 TQHGIRLPNSGCGAPLGL 41  
 RESULT 90  
 AAU07203 standard; protein; 476 AA.  
 XX  
 AC AAU07203;  
 XX  
 DT 09-SEP-2004 (reviewed)  
 DT 24-OCT-2001 (first entry)  
 XX  
 DE Human aspartyl protease 2b (Asp-2b).  
 XX  
 KM Human; aspartyl protease 1; Asp-1; neuroprotective;  
 KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;  
 KM beta-secretase; Alzheimer's disease.  
 XX  
 OS Homo sapiens.  
 OS Unidentified.  
 XX  
 FH Key Location/Qualifiers  
 FT Peptide 1..21  
 FT /note= "Signal peptide"  
 FT Misc-difference 22..45  
 FT /note= "Pre-propeptide"  
 FT Misc-difference 46..57  
 FT /note= "Propeptide"  
 FT Protein 58..476  
 FT /note= "Mature Aspartyl protease-2a"  
 FT Region 395..429  
 FT /note= "Alpha helical spacer region"  
 FT Domain 430..452  
 FT /note= "Transmembrane domain"  
 FT Domain 453..476  
 FT /note= "Cytoplasmic domain"  
 XX  
 MO200149097-A2.  
 XX

PD 12-JUL-2001.  
 XX  
 XX 09-MAY-2001; 2001MO-IB000797.  
 PF  
 XX 09-MAY-2001; 2001MO-IB000797.  
 PR  
 XX  
 XX (BIEN/) BIENKOWSKI M J.  
 PA (GURNEY/) GURNEY M E.  
 PA (HEINRICHSON/) HEINRICHSON R L.  
 PA (PARODI/) PARODI L A.  
 PA (YANR/) YAN R.  
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 DR WPI: 2001-502548/55.  
 DR N-PSDB; AAS11703.  
 XX  
 XX  
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.  
 XX  
 PS Claim 55; Fig 3; 185pp; English.  
 XX  
 CC The invention relates to a novel purified polypeptide comprising a  
 CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. Also included is an isoform of amyloid protein precursor (APP)  
 CC comprising the amino acid sequence of a APP or its fragment containing an  
 CC APP cleavage site recognizable by a mammalian beta-secretase, and further  
 CC comprising two lysine residues at the carboxyl terminus of the amino acid  
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used  
 CC for assaying for modulators of beta-secretase activity; identifying  
 CC agents that inhibit the APP processing activity of human Asp2 aspartyl  
 CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2  
 CC; and for reducing cellular production of amyloid beta (A-beta) from APP.  
 CC Agents identified by the above methods are useful for treating  
 CC Alzheimer's disease; and for identifying modulators of amyloid-beta  
 CC (A-beta) peptide production, for use in designing therapeutics for the  
 CC treatment or prevention of Alzheimer's disease. Probes and primers  
 CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp  
 CC nucleic acids in in vitro assays and in Northern and Southern blots. The  
 CC present sequence represents the amino acid sequence of human Asp-2b used  
 CC in the methods of the invention  
 CC  
 CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key  
 CC  
 XX  
 SQ Sequence 476 AA;  
 Query Match 100.0%; Score 104; DB 1; Length 476;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 22 TQHGIRLPNSGCGAPLGL 41  
 Db 22 TQHGIRLPNSGCGAPLGL 41  
 RESULT 91  
 AAE10630 standard; protein; 476 AA.  
 ID AAE10630;  
 AC AAE10630;  
 XX  
 DT 10-DEC-2001 (first entry)  
 DT  
 XX  
 DE Human aspartyl protease 2 (b) [hu-Asp2 (b)] protein.  
 XX  
 KM Human; aspartyl protease 2 (b); Asp2 (b); amyloid precursor protein; APP;  
 KM Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;  
 KM amyloid plaque; neuronal loss; proteolytic; neuroprotective;  
 KM chromosome 11q23.3-24.1.  
 KW

```

XX OS Homo sapiens.
XX FH Key
XX FT Peptide
XX FT Protein
XX FT Region
XX FT Domain
XX FT Domain
XX FT Domain
XX PN GB235767-A.
XX PD 04-JUL-2001.
XX PF 22-SEP-2000; 2000GB-00023315.
XX PR 23-SEP-1999; 99US-00404133.
XX PR 23-SEP-1999; 99US-0155493P.
XX PR 23-SEP-1999; 99WC-US020881.
XX PR 13-OCT-1999; 99US-00416901.
XX PR 06-DEC-1999; 99US-0169232P.
XX PA (PHAA ) PHARMACIA & UPJOHN CO.
XX PI Bienkowski MJ, Gurney M;
XX DR MPI; 2001-444208/48.
XX N-PSDB; AAD17866.
XX PT Polypeptide comprising fragments of human aspartyl protease with amyloid
XX PT precursor protein processing activity and alpha-secretase activity, for
XX PT identifying modulators useful in treating Alzheimer's disease.
XX PS Example 2; Fig 3; 187pp; English.
XX CC The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX CC proteins which lack transmembrane domain or amino terminal domain or
XX CC cytoplasmic domain and retains alpha-secretase activity and amyloid
XX CC protein precursor (APP) processing activity. The proteins of the
XX CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX CC activity, where modulators that increase hu-Asp1 alpha-secretase activity
XX CC are useful for treating Alzheimer's disease (AD) which causes progressive
XX CC dementia with consequent formation of amyloid plaques, neurofibrillary
XX CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
XX CC with the substrate under acidic conditions and determining the level of
XX CC hu-Asp1 proteolytic activity. The present sequence is short form of human
XX CC Asp2 protein, designated as Asp2(b). Asp2 gene is localised on chromosome
XX CC 11q23.3-24.1
XX SQ Sequence 476 AA;
XX
XX Query Match 100.0%; Score 104; DB 1; Length 476;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX QY 22 TOHGIRLPURSGCAPLGL 41
XX |||
XX Db 22 TOHGIRLPURSGCAPLGL 41
XX
XX RESULT 92
XX ID AAE06860 standard; protein; 476 AA.
XX AC AAE06860;
XX

```

```

DT 23-OCT-2001 (first entry)
XX DE Human aspartyl protease 2b (Hu-Asp2b) protein.
XX KW Human; aspartyl protease 2b; Asp 2b; beta-amyloid precursor protein; APP;
XX KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
XX KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; noctropic;
XX KW chromosome 11q23.3-24.1.
XX OS Homo sapiens.
XX FH Key
XX FT Peptide
XX FT Protein
XX FT Region
XX FT Domain
XX FT Domain
XX PN W0200150829-A2.
XX PD 19-JUL-2001.
XX PF 09-MAY-2001; 2001WO-IB000799.
XX PR 09-MAY-2001; 2001WO-IB000799.
XX PA (BIEN/) BIENKOWSKI M J.
XX PA (GURN/) GURNEY M E.
XX PA (HEIN/) HEINRIKSON R L.
XX PA (PARO/) PARODI L A.
XX PA (YANR/) YAN R.
XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX DR MPI; 2001-483072/52.
XX N-PSDB; AAD13022.
XX PT Novel purified polypeptide comprising fragment of mammalian aspartyl
XX PT protease 2, lacking Asp2 transmembrane domain and retaining beta
XX PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX PT activity.
XX PS Claim 55; Fig 3; 185pp; English.
XX CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX CC precursor protein (APP) isoforms and their corresponding DNA molecules.
XX CC Human aspartyl proteases can act as beta-secretase proteases useful for
XX CC treating Alzheimer's disease. APP isoforms are useful for identifying
XX CC modulators of amyloid-beta peptide production, for use in designing
XX CC therapeutics for the treatment and prevention of Alzheimer's disease,
XX CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX CC and neuronal loss. APP isoforms are also used in methods for identifying
XX CC inhibitors and modulators of human Asp2 activity. The invention relates
XX CC to a method for identifying agents that modulate the activity of human
XX CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX CC as a means to screen in cellular assays for the inhibitors of beta- and
XX CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.
XX CC The present sequence is human aspartyl protease 2 (Hu-Asp2), a 'short'
XX CC form designated as (Hu-Asp2b). Hu-Asp 2 gene is localised on chromosome
XX CC 11q23.3-24.1
XX SQ Sequence 476 AA;
XX
XX Query Match 100.0%; Score 104; DB 1; Length 476;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX

```

Matches	20;	Conservative	0;	Mismatches	0;	Indels	0;	Gaps	0;
Qy	22	TOHGIRLPRLRSGLGAPLGL	41						
Db	22	TOHGIRLPRLRSGLGAPLGL	41						
RESULT 93									
AAE02582									
ID	AAE02582	standard; protein; 476 AA.							
XX	AAE02582;								
XX	10-AUG-2001	(first entry)							
XX	DE	Human aspartyl protease 2b (Asp 2b).							
KM	Human; alpha-secretase; amyloid precursor protein; APP; therapy;								
KM	Alzheimer's disease; antialzheimer's; aspartyl protease 2b; Asp 2b;								
KM	beta-secretase; chromosome 11q23.3-24.1.								
XX	Homo sapiens.								
XX	Key	Location/Qualifiers							
FT	Peptide	1..21							
FT	Peptide	/label= Signal_peptide							
FT	Peptide	22..45							
FT	Peptide	/label= Asp_2b_prepropeptide							
FT	Peptide	46..57							
FT	Protein	/label= Asp_2b_propeptide							
FT	Protein	58..476							
FT	Active-site	/label= Mature_human_Asp_2b_protein							
FT	Active-site	93..95							
FT	Active-site	/label= Active_site_1							
FT	Active-site	264..266							
FT	Region	/label= Active_site_2							
FT	Region	395..429							
FT	Domain	/label= Alpha_helical_spacer							
FT	Domain	430..452							
FT	Domain	/label= Transmembrane_domain							
FT	Domain	453..476							
XX	Domain	/label= Cytoplasmic_domain							
XX	WO200123533-A2.								
XX	PN								
PD	05-APR-2001.								
XX	22-SEP-2000;	2000WO-US026080.							
XX	23-SEP-1999;	99US-0155493P.							
PR	23-SEP-1999;	99WO-US020881.							
PR	13-OCT-1989;	98US-00416901.							
PR	06-DEC-1999;	99US-0169232P.							
PA	(PHAA ) PHARMACIA & UPJOHN CO.								

CC	located on chromosome 11q23.3-24.1
SQ	Sequence 476 AA;
Query Match	100.0%; Score 104; DB 1; Length 476;
Best Local Similarity	100.0%; Pred. No. 33;
Matches	20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
OY	22 TONGIRLPLRSGLGAPLGL 41       22 TONGIRLPLRSGLGAPLGL 41
Db	
RESULT 94	
AU06604	
ID	AU06604 standard; protein; 476 AA.
XX	
AC	AU06604;
DT	09-SEP-2004 (revised)
DT	24-OCT-2001 (first entry)
XX	
DE	Human Aspartyl protease 2(b), Asp2(b).
XX	
KM	Human; Aspartyl protease; Asp2(b); beta-secretase; nootropic;
KW	neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
KX	amyloid-beta; Abeta.
XX	
OS	Homo sapiens.
OS	Unidentified.
FH	
FT	Key Location/Qualifiers
FT	Peptide 1..21
FT	/label= Signal peptide
FT	22..45
FT	Peptide /label= Pre_pro_peptide
FT	46..57
FT	/label= Pro_peptide
FT	57..476
FT	/label= Mature_Asp2(b)
FT	395..429
FT	/label= Alpha_helical_spacer_region
FT	430..452
FT	/note = Transmembrane domain
FT	453..476
FT	. Domain
FT	/note = Cytoplasmic domain
XX	
FN	WO200149098-A2.
XX	
PD	12-JUL-2001.
XX	
PF	09-MAY-2001; 2001WO-IB000798.
XX	
PR	09-MAY-2001; 2001WO-IB000798.
XX	
PA	(BIEN//) BIENKOWSKI M J.
PA	(GURNEY//) GURNEY M E.
PA	(HEIN//) HEINRIKSON R L.
PA	(PARODI//) PARODI L A.
PA	(VANR//) VAN R.
PI	Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Van R;
DR	MPJ; 2001-502549/55.
DR	N-P8DB; AAS11518.
PT	Noval purified polypeptide comprising fragment of mammalian aspartyl
PT	protease 2, lacking Asp2 transmembrane domain and retaining beta
PT	secretase activity of Asp2 useful for identifying inhibitors of Asp2
PS	activity.
PS	Claim 55; Fig 3; 185bp; English.

CC The invention relates to a purified polypeptide comprising a fragment of  
CC mammalian aspartyl protease (Asp2) protein which lacks the Asp2  
CC transmembrane domain and the Asp2 protein, and where the polypeptide and  
CC the fragment retain the beta-secretase activity of the mammalian Asp2  
CC protein. The invention also details polynucleotides for the Asp proteins  
CC and vectors expressing them, and a polypeptide (isoform of amyloid  
CC protein precursor (APP)) comprising the amino acid sequence of an APP or  
CC its fragment containing an APP cleavage site recognizable by a mammalian  
CC carboxyl terminus, and further comprising two lysine residues at the  
CC fragment. Also included in the invention are methods of identifying  
CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
CC useful for treating Alzheimer's disease. APP is useful in methods for  
CC identifying inhibitors or modulators of human Asp2 activity and amyloid-  
CC beta (Aβeta) peptide production. APP is also useful in designing  
CC therapeutic for the treatment or prevention of Alzheimer's disease. APP  
CC comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is  
CC associating with increased levels of Aβeta processing is useful in assays  
CC relating the Alzheimer's research. The expression vector is useful for  
CC recombinantly expressing APP. Nucleic acids that hybridize to APP  
CC oligonucleotides are useful as probes or primers. The probes are useful  
CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and  
CC Southern blots. The present sequence is human Asp2(b)

CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key

XX Sequence 476 AA;

XX

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
DB 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 95  
ABB06410  
ID ABB06410 standard; protein; 476 AA.

XX ABB06410;  
XX  
XX  
XX 31-MAY-2002 (first entry)  
XX  
XX Human aspartyl protease protein sequence SEQ ID NO:4.  
XX  
XX Beta-secretase; enzyme; cleavage site; amyloid protein precursor; APP;  
XX aspartyl protease; neuroprotective; nootropic; beta-secretase inhibitor;  
XX Alzheimer's disease.  
XX  
XX Homo sapiens.  
XX  
XX WO200206306-A2.  
XX  
XX 24-JAN-2002.  
XX  
XX 19-JUL-2001; 2001WO-US023035.  
XX  
XX 19-JUL-2000; 2000US-0219795P.  
XX  
XX 12-MAR-2001; 2001US-0275251P.  
XX  
XX (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
XX Yan R, Tomasselli AG, Gurney ME, Emmons TL, Bienkowski MJ;  
XX Heintzkes RL;  
XX  
XX WPI, 2002-216995/27.  
XX  
XX N-PSDB; ABL49915.  
XX  
XX Novel substrates for human aspartyl protease useful for identifying  
XX PT modulators of beta secretase activity of aspartyl protease for treating  
XX PT Alzheimer's disease.

XX Claim 63; Page 120-121; 188pp; English.

PS The present invention describes an isolated peptide (I) comprising a  
XX sequence of at least four amino acids, where the peptide is a substrate  
XX for conducting aspartyl protease assays. (I) has neuroprotective and  
XX nootropic activities, and can be used as an inhibitor of beta-secretase  
XX activity. A beta-secretase modulator from the present invention can be  
XX used for inhibiting beta-secretase activity in vivo, and in the  
XX manufacture of a medicament for the treatment of Alzheimer's disease.  
XX Pharmaceutical compositions from the present invention can be used for  
XX treating a disease or condition characterised by an abnormal beta-  
XX secretase activity. (I) is useful for identifying agents that modulate  
XX the activity of human Asp2 aspartyl protease (Hu-Asp2). (I) is useful as  
XX a core structure to construct derivatives. ABL49914 to ABL49925 and  
XX ABB06409 to ABB06593 represent sequences used in the exemplification of  
XX the present invention

XX

XX Sequence 476 AA;

XX

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
DB 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 96  
ABB06120  
ID ABB06120 standard; protein; 476 AA.

XX ABB06120;  
XX  
XX  
XX 10-MAY-2002 (first entry)  
XX  
XX Human NS protein sequence SEQ ID NO:212.  
XX  
XX  
XX Human; cytostatic; osteopathic; gynaecological; neuroprotective;  
XX antirheumatic; antiarthritic; antipneumatic; ophthalmological; anti-HIV;  
XX vasoregulatory; antiarteriosclerotic; antiinflammatory; dermatological;  
XX anorectic; muscular; antifertility; cardiovascular; anticoagulant;  
XX antifibrinolytic; hypotension; antistomatitis; immunomodulator; cardiac;  
XX anticonvulsant; antidiabetic; tranquiliser; antidepressant; neuroleptic;  
XX gastrointestinal; virucide; anticancer; cerebroprotective; nootropic;  
XX contraceptive; vaccine; gene therapy; cancer; osteoporosis; dystonia;  
XX endometriosis; degenerative disease; multiple sclerosis; psoriasis;  
XX rheumatoid arthritis; cataract; restenosis; atherosclerosis; glaucoma;  
XX inflammation; skin disorder; obesity; muscular dystrophy; AIDS;  
XX infertility; cardiovascular disease; coagulation disease; hypertension;  
XX ischaemia; asthma; immune disease; epilepsy; angina; neurodegeneration;  
XX diabetes; anxiety; depression; schizophrenia; viral disease; stroke;  
XX gastric ulcer; Alzheimer's disease.

XX

XX Homo sapiens.  
XX  
XX WO200206315-A2.  
XX  
XX 24-JAN-2002.  
XX  
XX 17-JUL-2001; 2001WO-IL000653.  
XX  
XX 18-JUL-2000; 2000IL-00137345.  
XX  
XX 15-DEC-2000; 2000IL-00140354.  
XX  
XX (COMP-) COMPUGEN LTD.  
XX  
XX Mintz L, Freilich S, Bernstein J;  
XX  
XX WPI, 2002-155037/20.  
XX  
XX N-PSDB; ABL39774.  
XX

PT One hundred and twenty eight novel nucleic acid sequences, useful for  
PT treating and diagnosing e.g. cancer, asthma and Alzheimer's.  
PS Claim 6; Page 246-248; 290pp; English.  
XX  
CC ABL39691 to ABL39818 represent novel human nucleic acid sequences  
CC encoding the proteins given in ABB06037 to ABB06164. The novel sequences  
CC (NS) can have cytostatic, osteopathic, gynaecological, neuroprotective,  
CC antineumatic, antirheumatic, antiproliferative, ophthalmological, virucide,  
CC vasoconstrictive, antihypertensive, antiinflammatory, dermatological,  
CC anorectic, muscular, anti-HIV, antifertility, cardiovascular,  
CC anticoagulant, antituberculous, hypotensive, antidiabetic, cardiac,  
CC immunomodulator, anticonvulsant, antidiabetic, tranquiliser, anticancer,  
CC antidepressant, gastrointestinal, neuroleptic, cerebroprotective,  
CC neurotropic and contraceptive activities. The NS can be used in vaccines,  
CC gene therapy and antitense therapy. Nucleic acids, expression vectors and  
CC antibodies from the present invention can be used for treating and  
CC diagnosing e.g. cancer, osteoporosis, endometriosis, degenerative  
CC diseases, dystonia, multiple sclerosis, rheumatoid arthritis, psoriasis,  
CC cataracts, stenosis, atherosclerosis, inflammation skin disorders,  
CC glaucoma, obesity, muscular dystrophy, AIDS, infertility, cardiovascular  
CC disease, coagulation disease, ischaemia, hypertension, asthma, immune  
CC depression, schizophrenia, viral disease, gastric ulcers, stroke,  
CC Alzheimer's disease and as a contraceptive  
XX  
SQ Sequence 476 AA;  
Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLSGGAPVGL 41  
Db 22 TQHGIRLPRLSGGAPVGL 41  
RESULT 97  
ABR78591  
ID ABR78591 standard; protein; 476 AA.  
XX  
AC ABR78591;  
XX  
DT 16-JUL-2002 (first entry)  
XX  
DE Human Asp-2(b) protein sequence SEQ ID NO:6.  
XX  
KM Human; Asp-1; Asp-2; aspartyl protease; enzyme; Alzheimer's disease;  
KM proteolytic; chromosome 11q23.3-24.1.  
XX  
OS Homo sapiens.  
XX  
PN GB2367060-A.  
PN  
PD 27-MAR-2002.  
PD  
PF 29-OCT-2001; 2001GB-00025934.  
PF  
XX 23-SEP-1999; 99US-00404133.  
XX 23-SEP-1999; 99US-0155493P.  
XX 23-SEP-1999; 99WO-US020881.  
XX 13-OCT-1999; 99US-00416901.  
XX 06-DEC-1999; 99US-0169232P.  
XX 22-SEP-2000; 2000GB-00023315.  
XX  
PA (PAAA ) PHARMACIA & UPJOHN CO.  
PI  
PI Bilenkowiecki MJ, Gurney M;  
XX WPI; 2002-397167/43.  
XX DR N-PSDB; ABL52458.  
XX  
PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl

PT protease activity, e.g. for the diagnosis of Alzheimer's disease.  
PS Example 2; Fig 3; 182pp; English.  
XX  
CC The present invention describes a human aspartyl protease 1 (hu-Asp1)  
CC substrate (II) which comprises a peptide of no more than 50 amino acids,  
CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
CC (1) under acidic conditions; and (b) determining the level of hu-Asp1  
CC proteolytic activity; (2) a purified polynucleotide (III) comprising a  
CC nucleotide sequence that hybridises under stringent conditions to the non  
CC -coding strand complementary to a defined 1804 nucleotide sequence (see  
CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1  
CC proteolytic activity and lacks nucleotides encoding a transmembrane  
CC domain; (3) a purified polynucleotide (III') comprising a sequence that  
CC hybridises under stringent conditions to (III) (the nucleotide sequence  
CC encodes a polypeptide further lacking a pro-peptide domain corresponding  
CC to amino acids 23-62 of hu-Asp1 (see ABR78589)); (4) a vector (IV)  
CC comprising (III) or (III'); and (5) a host cell (V) transformed or  
CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease  
CC substrate (II) may be used as an enzyme substrate in assays to detect  
CC aspartyl protease activity, (II) and therefore diagnose diseases  
CC associated with aberrant hu-Asp1 expression and activity such as  
CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
CC sequence represents hu-Asp2(b) from the present invention  
XX  
SQ Sequence 476 AA;  
Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLSGGAPVGL 41  
Db 22 TQHGIRLPRLSGGAPVGL 41  
RESULT 98  
ADJ94318  
ID ADJ94318 standard; protein; 476 AA.  
XX  
AC ADJ94318;  
XX  
DT 03-JUN-2004 (first entry)  
XX  
DE Human aspartyl protease 2b, Asp-2b.  
XX  
KM Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);  
KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;  
KM neurotropic; neuroprotective; amyloid beta.  
XX  
OS Homo sapiens.  
XX  
PN US6706485-B1.  
PN  
PD 16-MAR-2004.  
PD  
PF 12-APR-2000; 2000US-00548376.  
PF  
XX 24-SEP-1998; 98US-0101594P.  
XX 23-SEP-1999; 99US-00404133.  
XX 23-SEP-1999; 99US-0155493P.  
XX 23-SEP-1999; 99WO-US020881.  
XX 13-OCT-1999; 99US-00416901.  
XX  
PA (PAAA ) PHARMACIA & UPJOHN CO.  
PI  
PI Gurney ME, Bilenkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
XX WPI; 2004-236722/22.  
XX DR N-PSDB; ADJ94317.  
XX  
PT

XX Identifying agents that modulate activity of Asp2 aspartyl protease  
 PT useful for treating or preventing Alzheimer's disease involves comprising  
 PT APP processing activity of protease in presence and absence of test  
 PT agent.  
 XX  
 XX  
 PS Claim 7; SEQ ID NO 6; 109pp; English.  
 XX  
 CC The invention relates to identifying agents that modulate activity of  
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 CC precursor protein (APP) in the presence and absence of a test agent,  
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated  
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy terminus amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KX or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW  
 CC or APP695-SW-KX, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the activity  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease. Preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of agents that  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence represents an aspartyl protease  
 CC of the invention.  
 CC  
 SQ Sequence 476 AA;  
 Query Match 100.0%; Score 104; DB 1; Length 476;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 22 TQHGIRLPRLRSGLGAPLGL 41  
 DB 22 TQHGIRLPRLRSGLGAPLGL 41  
 RESULT 99  
 ADO50414 standard; protein; 476 AA.  
 XX  
 AC ADO50414;  
 XX  
 DT 29-JUL-2004 (first entry)  
 XX  
 DE Human aspartyl protease (Asp)-2(b).  
 XX  
 KM Aspartyl protease; Asp2 beta secretase; amyloid precursor protein; APP;  
 KM Alzheimer's disease; gene therapy; human; enzyme.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FH Peptide 1..21  
 FT /label= Signal\_peptide  
 FT Protein 22..476  
 FT /note= "Human mature aspartyl protease (Asp)-2"  
 FT Domain 430..452  
 FT /note = Transmembrane domain  
 FT Domain 453..476  
 FT /note = Cytoplasmic domain  
 XX  
 PN US6737510-B1.

XX  
 PD 18-MAY-2004.  
 XX  
 PF 12-APR-2000; 2000US-00548373.  
 XX  
 PR 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99MO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 XX  
 PA (PMAA ) PHARMACIA & UPJOHN CO.  
 XX  
 FI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
 DR WPI; 2004-387112/36.  
 DR N-PSDB; ADO50413.  
 XX  
 PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG  
 PT involved in processing amyloid precursor protein into amyloid beta,  
 PT useful in preparing a composition for treating or preventing Alzheimer's  
 PT disease.  
 PS Claim 1; SEQ ID NO 6; 108pp; English.  
 XX  
 CC The invention relates to a method for identifying an agent that decreases  
 CC the protease activity of the aspartyl protease (Asp) polypeptide. It also  
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
 CC cleavage site of the amyloid precursor protein (APP). The invention is  
 CC useful in preparing a composition for treating or preventing Alzheimer's  
 CC disease. It is also useful in gene therapy. The present sequence is human  
 CC Asp-1 protein. This sequence is used to illustrate the method of the  
 CC invention.  
 CC  
 SQ Sequence 476 AA;  
 Query Match 100.0%; Score 104; DB 1; Length 476;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 22 TQHGIRLPRLRSGLGAPLGL 41  
 DB 22 TQHGIRLPRLRSGLGAPLGL 41  
 RESULT 100  
 ADR75327 standard; protein; 476 AA.  
 XX  
 AC ADR75327;  
 XX  
 DT 18-NOV-2004 (first entry)  
 XX  
 DE Human aspartyl protease (Asp)-2(b) enzyme.  
 XX  
 KM Aspartyl protease; Asp1 amyloid precursor protein; APP; amyloid beta;  
 KM chromosome identification; Alzheimer's disease; human; enzyme.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FH Peptide 1..21  
 FT /label= Signal\_peptide  
 FT Protein 22..476  
 FT /note= "Human mature aspartyl protease (Asp)-2"  
 FT Domain 430..452  
 FT /note = Transmembrane domain  
 FT Domain 453..476  
 FT /note = Cytoplasmic domain  
 XX  
 PN US2004166507-A1.  
 XX  
 PD 26-AUG-2004.



```

XX 29-AUG-2003; 2003US-00652045.
PR 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155433P.
PR 13-OCT-1999; 99US-00416901.
XX
PA (GURNEY) GURNEY M E.
PA (BIEN/) BIENKOWAKI M J.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
PI Gurney ME, Bienkowiaki MJ, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2004-624916/60.
DR N-PSDB; ADR75326.
XX
XX Novel purified/isolated polynucleotide encoding polypeptide having
PT aspartyl protease activity involved in processing amyloid precursor
PT protein into amyloid beta, useful in identifying agent decreasing
PT activity of aspartyl protease.
XX
PS Claim 1; SEQ ID NO 6; 107pp; English.
XX
CC The invention relates to nucleic acid sequences encoding aspartyl
CC protease (Asp) polypeptides having aspartyl protease activity involved in
CC processing amyloid precursor protein (APP) into amyloid beta. The
CC invention also relates to a method for identifying an agent that
CC decreases the protease activity of the Asp. Asp DNA is useful in
CC chromosome identification as they can hybridize with a specific location
CC on a human chromosome and in identifying the relationship between genes
CC and diseases (particular gene responsible for causing diseases). It is
CC also useful for identifying candidates to modulate the progression of
CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The
CC present sequence is the human Asp-2(b) enzyme. This sequence is used to
CC illustrate the method of the invention.
XX
SQ Sequence 476 AA;

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Query Match 100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPLRSGLGAPLGL 41
Db 22 TQHGIRLPLRSGLGAPLGL 41

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RESULT 101
AAB61334
ID AAB61334 standard; protein; 488 AA.
XX
AC AAB61334;
XX
DT 02-APR-2001 (first entry)
XX
DE Memapsin 2 protein.
XX
KW Memapsin 2; catalyst; Alzheimer's.
XX
OS Homo sapiens.
XX
PN WO200100663-A2.
XX
PD 04-JAN-2001.
XX
PF 27-JUN-2000; 2000WO-US017661.
XX
PR 28-JUN-1999; 99US-0141363P.
PR 30-NOV-1999; 99US-0168060P.

```

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PR 25-JAN-2000; 2000US-0177836P.
PR 27-JAN-2000; 2000US-0178368P.
PR 08-JUN-2000; 2000US-0210282P.
XX
XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.
XX
PI Tang JUN, Lin X, Koelsch G;
XX
XX WPI; 2001-102885/11.
DR
XX Purified recombinant catalytically active memapsin 2, used to screen
PT inhibitors of it, which are used to treat and prevent Alzheimer's
PT disease.
XX
PS Claim 2; Page 73-75; 86pp; English.
XX
CC The present invention relates to a purified recombinant catalytically
CC active memapsin 2. The invention may be used for isolating inhibitors
CC which are used to treat or prevent Alzheimer's disease. The invention may
CC also be used to screen for individuals more genetically prone to develop
CC Alzheimer's disease
XX
SQ Sequence 488 AA;

```

```

Query Match 100.0%; Score 104; DB 1; Length 488;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 22 TQHGIRLPLRSGLGAPLGL 41
Db 9 TQHGIRLPLRSGLGAPLGL 28

```

```

RESULT 102
AAB6572
ID AAB6572 standard; protein; 488 AA.
XX
AC AAB6572;
XX
DT 12-APR-2001 (first entry)
XX
DE Human memapsin 2.
XX
KW Human; memapsin 2; neurotrophic; neuroprotective; amyloid precursor protein;
KW APP; memapsin 2 inhibitor; Alzheimer's disease.
XX
OS Homo sapiens.
XX
PN WO200100665-A2.
XX
PD 04-JAN-2001.
XX
PF 27-JUN-2000; 2000WO-US017742.
XX
PR 28-JUN-1999; 99US-0141363P.
PR 30-NOV-1999; 99US-0168060P.
PR 25-JAN-2000; 2000US-0177836P.
PR 27-JUN-2000; 2000US-0178368P.
PR 08-JUN-2000; 2000US-0210282P.
XX
XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.
XX
XX (UNIT ) UNIV ILLINOIS FOUND.
XX
PI Tang JUN, Hong L, Ghosh AK;
XX
XX WPI; 2001-137933/14.
DR N-PSDB; AAF31848.
XX
XX Novel memapsin 2 inhibitors which bind to active site of memapsin 2
PT having 2 catalytic aspartic residues and substrate binding cleft, used to
PT treat Alzheimer's disease by blocking amyloid precursor protein cleavage.
XX
XX Example 1; Page 72-74; 86pp; English.

```

XX The present sequence is given in a specification relating to an inhibitor  
CC of catalytically active memapsin 2. The inhibitor binds to the memapsin 2  
CC active site, which is defined by the presence of two catalytic aspartic  
CC residues and a substrate binding cleft. The inhibitor is useful for the  
CC treatment and diagnosis of Alzheimer's disease. It is useful in screens  
CC for individuals with a genetic predisposition to Alzheimer's disease. The  
CC inhibitor is useful as a reagent for specifically binding to memapsin 2  
CC or memapsin 2 analogues and for aiding in memapsin 2 isolation,  
CC purification and characterization  
XX

SQ Sequence 488 AA;  
Query Match 100.0%; Score 104; DB 1; Length 488;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TQHGIRLPURSGUGAPLGL 41  
DB 9 TQHGIRLPURSGUGAPLGL 28

RESULT 103  
ABG78372  
ID ABG78372 standard; protein; 488 AA.  
AC ABG78372;  
DT 15-NOV-2002 (first entry)  
DE Human promemapsin 2.  
XX Human; enzyme; memapsin 2; aspartic protease; beta secretase;  
XX degenerative disease; Alzheimer's disease; amyloid precursor protein;  
XX APP; neuroprotective; neurotropic; inhibitor;  
XX substrate side-chain preference.  
XX Homo sapiens.  
XX WO200253594-A2.  
XX 11-JUL-2002.  
XX 28-DEC-2001; 2001WO-US050826.  
XX 28-DEC-2000; 2000US-0258705P.  
XX 14-MAR-2001; 2001US-0275756P.  
XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.  
XX (UNII ) UNII ILLINOIS FOUND.  
XX PA  
XX PI Tang JUN, Koelsch G, Choesh AK;  
XX WPI; 2002-619088/66.  
XX DR  
XX PT New memapsin 2 activity inhibitor useful in treatment of e.g. Alzheimer's  
XX PT disease.  
XX PS Claim 7; Fig 7; 7app; English.  
XX The invention relates to an inhibitor of catalytically active memapsin 2  
CC (an aspartic protease which can cleave at beta secretase sites), which  
CC binds to the active site of memapsin 2 defined by the presence of two  
CC catalytic aspartic residues and substrate binding cleft. Also included is  
CC a method of determination of the substrate side-chain preference in  
CC memapsin 2 sub-sites comprising: (a) reacting a mixture of memapsin 2  
CC substrates with memapsin 2, and determining the sub-site preference of  
CC memapsin 2 by determining relative initial hydrolysis rates of the  
CC mixture of memapsin 2 substrates; or (b) preparing a combinatorial  
CC library of memapsin 2 inhibitors containing a base sequence taken from  
CC OM99-2 (Glu-Val-Ans-Leu-Ala-Ala-Glu-phe), probing the library of  
CC inhibitors with memapsin 2 which binds to several inhibitors to generate  
CC several bound memapsin 2, and detecting the bound memapsin 2 with an

CC antibody raised to memapsin 2 and an alkaline phosphatase conjugated  
CC secondary antibody. The inhibitors may be used in the manufacture of a  
CC medicament for the treatment of Alzheimer's disease since memapsin 2 may  
CC be involved in the cleavage of amyloid precursor protein (APP), and for  
CC determining the substrate side-chain preference in memapsin 2 sub-sites.  
CC The present sequence represents human memapsin 2 (either prepromemapsin 2  
CC or mature memapsin)  
XX

SQ Sequence 488 AA;  
Query Match 100.0%; Score 104; DB 1; Length 488;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TQHGIRLPURSGUGAPLGL 41  
DB 9 TQHGIRLPURSGUGAPLGL 28

RESULT 104  
AAU99488  
ID AAU99488 standard; protein; 488 AA.  
AC AAU99488;  
DT 07-OCT-2002 (first entry)  
DE Human memapsin 2.  
XX Human; memapsin 2; beta secretase; aspartic protease; APP;  
XX beta-amyloid precursor protein; amyloid plaque; Alzheimer's disease;  
XX neuroprotective; neurotropic; enzyme.  
XX Homo sapiens.  
XX US2002049303-A1.  
XX 25-APR-2002.  
XX 28-FEB-2001; 2001US-00796264.  
XX 28-JUN-1999; 99US-0141363P.  
XX 30-NOV-1999; 99US-0168060P.  
XX 25-JAN-2000; 2000US-0177836P.  
XX 27-JAN-2000; 2000US-0178368P.  
XX 27-JUN-2000; 2000US-00604608.  
XX (TANG/) TANG J J N.  
XX (LINK/) LIN X.  
XX (KOEL/) KOELSCH G.  
XX (HONG/) HONG L.  
XX PI Tang JUN, Lin X, Koelsch G, Hong L;  
XX WPI; 2002-507280/54.  
XX DR N-PSDB; ABR88641.  
XX PT New recombinant catalytically active memapsin 2, useful to screen for  
XX PT inhibitors of memapsin 2 which can be used to prevent and treat  
XX PT Alzheimer's disease.  
XX PS Claim 2; Page 22-23; 4app; English.  
XX The present invention relates to methods for the production of purified,  
CC recombinant catalytically active, memapsin 2 (beta secretase). Memapsin  
CC 2, a member of the aspartic protease family, cleaves beta-amyloid  
CC precursor protein (APP) found in amyloid plaques. The recombinant  
CC memapsin 2 is useful for identifying inhibitors of memapsin 2 in the  
CC design of drugs for the treatment and/or prevention of Alzheimer's  
CC disease. The recombinant memapsin 2 can be used to immunise against  
CC Alzheimer's disease. The present sequence represents human memapsin 2  
XX  
SQ Sequence 488 AA;



CC screening of specific inhibitors which are useful in treating and  
 CC preventing Alzheimer's disease. The current sequence is that of the human  
 CC memapsin 2 protein of the invention.

XX Sequence 488 AA;

Query Match 100.0%; Score 104; DB 1; Length 488;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLSGGAPLGL 41  
 |||||  
 DB 9 TOHGIRLPRLSGGAPLGL 28

RESULT 107

AAW59807  
 ID AAW59807 standard; protein; 501 AA.

XX AAW59807;

XX 26-OCT-1998 (first entry)

XX Amino acid sequence of human ASP2 (aspartic protease 2).

XX Human; ASP2; aspartic protease 2; agonist; antagonist; immunospecific;  
 KW antibody; inhibition; Alzheimer's disease; cancer; proteinase;  
 KW prohormone processing.

XX Homo sapiens.

XX EP855444-A2.

XX 29-JUL-1998.

XX 27-JAN-1998; 98EP-00300573.

XX 28-JAN-1997; 97GB-00001684.

XX (SMIK ) SMITHKLINE BEECHAM PLC.

XX (SMIK ) SMITHKLINE BEECHAM CORP.

XX Powell DJ, Smith TS, Chapman CG, Murphy K;

XX WPI; 1998-389809/34.

XX N-PSDB; AAV41696.

XX New nucleic acid encoding human aspartic protease 2 - used to treat,  
 PT prevent and diagnose e.g. Alzheimer's disease, cancer and prohormone  
 PT processing.

XX Claim 1; Page 7; 26pp; English.

XX This is the amino acid sequence of the human ASP2 (aspartic protease  
 CC family), used in the method of the invention. Agonists and antagonists  
 CC for ASP2 immunospecific antibodies are used to treat conditions requiring  
 CC increased or decreased activity or expression of ASP2 respectively. ASP2  
 CC is used to treat and diagnose e.g. Alzheimer's disease, cancer and  
 CC prohormone processing and ASP2 or a fragment can be used to induce an  
 CC immune response against the above conditions

XX Sequence 501 AA;

Query Match 100.0%; Score 104; DB 1; Length 501;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLSGGAPLGL 41  
 |||||  
 DB 22 TOHGIRLPRLSGGAPLGL 41

RESULT 108

AAW88425  
 ID AAW88425 standard; protein; 501 AA.

XX AAW88425;

XX 03-AUG-2000 (first entry)

XX Human aspartyl protease 2 (a) (Asp2) amino acid sequence.

XX Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;  
 KW Alzheimer's disease; beta secretase site.

XX Homo sapiens.

XX W0200017369-A2.

XX 30-MAR-2000.

XX 23-SEP-1999; 99WO-US020881.

XX 24-SEP-1998; 98US-0101594P.

XX (PHAA ) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Van R;

XX WPI; 2000-303209/26.

XX N-PSDB; AAW15662.

XX New enzyme designated human aspartase useful in research into Alzheimer's  
 PT Disease is capable of cleaving amyloid protein precursor at the beta  
 PT secretase site to produce amyloid beta peptide.

XX Claim 48; Fig 2; 183pp; English.

XX This sequence represents the human aspartyl protease 2 (Asp2) amino acid  
 CC sequence. The invention relates to a protease (e.g. Asp2) capable of  
 CC cleaving the beta secretase site of amyloid precursor protein (APP). The  
 CC protease contains a sequence encoding the amino acid sequence DTG and a  
 CC sequence encoding DSG or DTG separated by 100-300 amino acids. When  
 CC mutated the APP gene causes an autosomal dominant form of Alzheimer's  
 CC disease. APP localises to the cell surface membrane and have a single C-  
 CC terminal transmembrane domain. Proteolytic processing of APP produces the  
 CC amyloid beta protein, which is possibly very important in Alzheimer's  
 CC disease. The invention includes a nucleotide sequence encoding the  
 CC protease, a vector containing the nucleotide sequence, and a cell line  
 CC comprising the vector. Methods for screening for inhibitors of beta  
 CC secretase activity are also given in the invention. The human aspartase  
 CC protein and nucleotide sequences and the methods for identifying  
 CC inhibitors of the protease, are useful in the treatment of and research  
 CC in to Alzheimer's disease

XX Sequence 501 AA;

Query Match 100.0%; Score 104; DB 1; Length 501;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLSGGAPLGL 41  
 |||||  
 DB 22 TOHGIRLPRLSGGAPLGL 41

RESULT 109

AAW94767  
 ID AAW94767 standard; protein; 501 AA.

XX AAW94767;

XX 12-FEB-2001 (first entry)

XX Human beta-secretase amino acid sequence.

KM Beta-secretase; enzyme; amyloid plaque; Alzheimer's disease; human;  
 KM Down's syndrome; amyloid angiopathy; gene therapy; neuroprotective.  
 OS Homo sapiens.  
 XX  
 XX Key Location/Qualifiers  
 XX FT Peptide 1..45  
 XX FT /label= putative signal peptide  
 XX FT Protein 46..501  
 XX FT /label= Beta-secretase  
 XX MO200058479-A1.  
 XX PN  
 XX PD 05-OCT-2000.  
 XX PF 23-MAR-2000; 2000MO-US007755.  
 XX PR 26-MAR-1999; 99US-00277229.  
 XX PA (AMGE-) AMGEN INC.  
 XX PI Ciltrom M, Vaasat RJ, Bennett BD;  
 XX DR WPI; 2000-534643/56.  
 XX DR N-PSDB; AAA28278.  
 XX PT Isolated beta-secretase nucleic acids and encoded polypeptides, useful  
 XX PT for diagnosis and gene therapy of Alzheimer's disease.  
 XX PS Claim 1; Fig 4; 145pp; English.  
 XX  
 CC This invention relates to 3 nucleotide sequences encoding beta-secretase  
 CC proteins. Beta-secretase is an enzyme involved in the production of one  
 CC of the components of amyloid plaques involved in Alzheimer's disease. The  
 CC invention includes an expression vector comprising the nucleotide  
 CC sequence, a host cell comprising the expression vector, and a process for  
 CC producing the protein through culturing the transformed cells. Also  
 CC included in the invention are a polypeptide derivative of the beta-  
 CC secretase protein, a fusion protein comprising beta-secretase fused to a  
 CC heterologous amino acid sequence, and a method for modulating the levels  
 CC of beta-secretase polypeptide in a mammal comprising administering the  
 CC polynucleotide sequence. Beta-secretase exhibits neuroprotective and  
 CC neurotropic activity. The beta-secretase nucleotide sequence may be used to  
 CC map locations of the beta-secretase gene and related genes on chromosomes  
 CC and as hybridization probes in diagnostic assays to test for the presence  
 CC of beta-secretase DNA or RNA, such as in Alzheimer's disease, Down's  
 CC syndrome, and amyloid angiopathy. The nucleotide sequence may also be  
 CC used as anti-sense inhibitors of beta-secretase expression, in gene  
 CC therapy of Alzheimer's disease, and for the identification of compounds  
 CC that modulate beta-secretase activity. Antibodies to the beta-secretase  
 CC protein may be used for in vitro and in vivo diagnostic purposes to  
 CC detect the presence of beta-secretase polypeptide in a body fluid or cell  
 CC sample. The present sequence represents the human beta-secretase protein  
 CC  
 XX  
 XX Sequence 501 AA;  
 SQ  
 Query Match 100.0%; Score 104; DB 1; Length 501;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 Oy 22 TONGIRLPRLRSGLGAPLGL 41  
 Db 22 TONGIRLPRLRSGLGAPLGL 41  
 RESULT 110  
 ID AAB07896 standard; protein; 501 AA.  
 XX AAB07896;  
 XX AC  
 XX DT 14-NOV-2000 (first entry)  
 XX

DE Amino acid sequence of a human beta-secretase enzyme.  
 XX  
 XX Beta-secretase; beta-amyloid precursor protein; beta-amyloid peptide;  
 KM amyloid plaque component; Alzheimer's disease; amyloidogenic disease;  
 KM inhibitor.  
 XX  
 XX Homo sapiens.  
 XX OS  
 XX MO200047618-A2.  
 XX PN  
 XX PD 17-AUG-2000.  
 XX PF 10-FEB-2000; 2000MO-US003819.  
 XX PR 10-FEB-1999; 99US-0119571P.  
 XX PR 15-JUN-1999; 99US-0139172P.  
 XX PA (ELAN-) ELAN PHARM INC.  
 XX PI Anderson JP, Basi G, Frigon N, John V, Power M;  
 XX PI Sinha S, Tatsuno G, Tung J, Wang S, Mcconlogue L;  
 XX DR WPI; 2000-533011/48.  
 XX DR N-PSDB; AAA59550, AAA59551.  
 XX PT Purified beta-secretase protein used in assays to discover inhibitors  
 XX PT which can be used for the treatment of amyloidogenic diseases e.g.  
 XX PT Alzheimer's disease.  
 XX PS Claim 17; Fig 2A; 121pp; English.  
 XX  
 CC The specification describes a beta-secretase enzyme. The enzyme cleaves  
 CC beta-amyloid precursor protein to produce beta-amyloid peptide. This  
 CC enzyme is therefore implicated in the production of amyloid plaque  
 CC components which accumulate in the brains of individuals afflicted with  
 CC Alzheimer's disease. Inhibitors of beta-secretase are administered to a  
 CC mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-  
 CC like pathology to test if they maintain or improve cognitive ability or  
 CC reduce the plaque burden. The compounds are used for the treatment of  
 CC amyloidogenic diseases e.g. Alzheimer's disease. The present sequence  
 CC represents a human beta-secretase enzyme  
 CC  
 XX  
 XX Sequence 501 AA;  
 SQ  
 Query Match 100.0%; Score 104; DB 1; Length 501;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 Oy 22 TONGIRLPRLRSGLGAPLGL 41  
 Db 22 TONGIRLPRLRSGLGAPLGL 41  
 RESULT 111  
 ID AAU07202 standard; protein; 501 AA.  
 XX AAU07202;  
 XX AC  
 XX DT 09-SEP-2004 (revised)  
 XX DT 24-OCT-2001 (first entry)  
 XX  
 XX Human aspartyl protease 2a (Asp-2a).  
 XX  
 XX Human; aspartyl protease 1; Asp-1; neurotropic; neuroprotective;  
 KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;  
 KM beta-secretase; Alzheimer's disease.  
 XX  
 XX Homo sapiens.  
 XX OS  
 XX DT 14-NOV-2000 (first entry)  
 XX FT Key Location/Qualifiers  
 XX FT Peptide 1..21

FT Misc-difference 22..45 /note= "Signal peptide"  
 FT Misc-difference /note= "Pre-propeptide"  
 FT Misc-difference 46..57  
 FT Protein /note= "Propeptide"  
 FT Protein 58..501  
 FT Region /note= "Mature Aspartyl protease-2a"  
 FT Region 420..454  
 FT Domain /note= "Alpha helical spacer region"  
 FT Domain 455..477  
 FT Domain /note= "Transmembrane domain"  
 FT Domain 478..501  
 FT Domain /note= "Cytoplasmic domain"  
 WO200149097-A2.  
 12-JUL-2001.  
 09-MAY-2001; 2001WO-IB000797.  
 09-MAY-2001; 2001WO-IB000797.  
 09-MAY-2001; 2001WO-IB000797.  
 (BIEN/) BIENKOWSKI M J.  
 (GURN/) GURNEY M E.  
 (HEIN/) HEINRIKSON R L.  
 (PARO/) PARODI L A.  
 (YANR/) YAN R.  
 Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R,  
 WPI; 2001-502548/55.  
 N-PSDB; AAS11702.  
 Novel purified polypeptide comprising fragment of mammalian aspartyl  
 protease 2, lacking Asp2 transmembrane domain and retaining beta  
 secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 activity.  
 Claim 49; Fig 2; 185pp; English.  
 The invention relates to a novel purified polypeptide comprising a  
 fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
 Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
 and the fragment retain the beta-secretase activity of the mammalian Asp2  
 protein. Also included is an isoform of amyloid protein precursor (APP)  
 comprising the amino acid sequence of a APP or its fragment containing an  
 APP cleavage site recognizable by a mammalian beta-secretase, and further  
 comprising two lysine residues at the carboxyl terminus of the amino acid  
 sequence of the mammalian APP or APP fragment. The polypeptides are used  
 for assaying for modulators of beta-secretase activity; identifying  
 agents that inhibit the APP processing activity of human Asp2 aspartyl  
 protease (Hu-Asp2); identifying agents that modulate the activity of Asp2  
 ; and for reducing cellular production of amyloid beta (Abeta) from APP.  
 Agents identified by the above methods are useful for treating  
 Alzheimer's disease; and for identifying modulators of amyloid-beta  
 (Abeta) peptide production, for use in designing therapeutics for the  
 treatment or prevention of Alzheimer's disease. Probes and primers  
 derived from Asp nucleic acid sequences are useful for detecting Hu-Asp  
 nucleic acids in in vitro assays and in Northern and Southern blots. The  
 present sequence represents the amino acid sequence of human Asp-2a used  
 in the methods of the invention  
 Revised record issued on 09-SEP-2004 : Correction to Feature Table Key  
 Sequence 501 AA;  
 Query Match 100.0%; Score 104; DB 1; Length 501;  
 Best Local Similarity 100.0%; Pred. No.33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 22 TQHGIRLPURSGUGAPLGL 41  
 22 TQHGIRLPURSGUGAPLGL 41

RESULT 112  
 AAE10629  
 ID AAE10629 standard; protein; 501 AA.  
 AC AAE10629;  
 DT 10-DEC-2001 (first entry)  
 DE Human aspartyl protease 2(a) [hu-Asp2(a)] protein.  
 KW Human; aspartyl protease 2(a); Asp2(a); amyloid precursor protein; APP;  
 KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;  
 KW amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;  
 KW chromosome 11q23.3-24.1.  
 OS Homo sapiens.  
 FH Key Location/Qualifiers  
 FT Peptide 1..21  
 FT Peptide /label= Signal\_peptide  
 FT Peptide 22..45  
 FT Peptide /label= Asp\_2a\_prepropeptide  
 FT Peptide 46..57  
 FT Protein /label= Asp\_2a\_propeptide  
 FT Protein 58..501  
 FT Region /label= Mature\_human\_Asp\_2a\_protein  
 FT Region 420..454  
 FT Domain /label= Alpha-helical\_spacer\_region  
 FT Domain 455..477  
 FT Domain /label= Transmembrane\_domain  
 FT Domain 478..501  
 FT Domain /label= Cytoplasmic\_domain  
 GB357767-A.  
 04-JUL-2001.  
 22-SEP-2000; 2000GB-00023315.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99WO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 PR 06-DEC-1999; 99US-0169232P.  
 PA (PHAA ) PHARMACIA & UPJOHN CO.  
 PI Bienkowski MJ, Gurney M;  
 WPI; 2001-444208/48.  
 N-PSDB; AAD17865.  
 DR N-PSDB; AAD17865.  
 PT Polypeptide comprising fragments of human aspartyl protease with amyloid  
 precursor protein processing activity and alpha-secretase activity, for  
 identifying modulators useful in treating Alzheimer's disease.  
 Example 2; Fig 2; 187pp; English.  
 The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1  
 proteins which lack transmembrane domain or amino terminal domain or  
 cytoplasmic domain and retains alpha-secretase activity and amyloid  
 protein precursor (APP) processing activity. The proteins of the  
 invention are useful for assaying hu-Asp1 alpha-secretase activity, which  
 in turn is useful for identifying modulators of hu-Asp1 alpha-secretase  
 activity, where modulators that increase hu-Asp1 alpha-secretase activity  
 are useful for treating Alzheimer's disease (AD) which causes progressive  
 dementia with consequent formation of amyloid plaques, neurofibrillary  
 tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful  
 for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein  
 with the substrate under acidic conditions and determining the level of  
 hu-Asp1 proteolytic activity. The present sequence is long form of human

CC Asp2 proteain, designated as Asp2(a). Asp2 gene is localised on chromosome  
CC 11q23.3-24.1  
XX  
SQ Sequence 501 AA;  
Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLSGLGAPVGL 41  
DB 22 TQHGIRLPRLSGLGAPVGL 41  
RESULT 113  
AAE06859  
ID AAE06859 standard; proteain; 501 AA.  
XX  
AC AAE06859;  
XX  
DT 23-OCT-2001 (first entry)  
XX  
DE Human aspartyl protease 2a (Hu-Asp2a) proteain.  
XX  
KW Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;  
KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;  
KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotropic;  
KW neuroprotective; antisense therapy; gene therapy;  
KW chromosome 11q23.3-24.1.  
XX  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT Peptide 1..21  
FT /label= Signal\_peptide  
FT Protein 22..501  
FT /note= "Mature human aspartyl protease 2a (Hu-Asp2a)"  
FT Region 420..454  
FT /note= "Alpha helical spacer region"  
FT Domain 455..477  
FT /label= Transmembrane\_domain  
FT Domain 478..501  
FT /label= Cytoplasmic\_domain  
XX  
XX W0200150829-A2.  
XX  
XX 19-JUL-2001.  
XX  
PD 09-MAY-2001; 2001WO-IB000799.  
XX  
PF 09-MAY-2001; 2001WO-IB000799.  
XX  
PR 09-MAY-2001; 2001WO-IB000799.  
XX  
XX (BIEN/) BIENKOWSKI M J.  
XX (GURNEY) GURNEY M E.  
XX (HEIN/) HEINRIKSON R L.  
XX (PARO/) PARODI L A.  
XX (YANR/) YAN R.  
XX  
PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
XX WPI: 2001-483072/52.  
XX N-PSDB; AAD13021.  
XX  
DR Novel purified polypeptide comprising fragment of mammalian aspartyl  
XX protease 2, lacking Asp2 transmembrane domain and retaining beta  
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2  
XX activity.  
XX  
PS Claim 49; Fig 2; 185pp; English.  
XX  
XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid  
XX precursor protein (APP) isoforms and their corresponding DNA molecules.  
CC Human aspartyl proteases can act as beta-secretase proteases useful for

CC treating Alzheimer's disease. APP isoforms are useful for identifying  
CC modulators of amyloid-beta peptide production, for use in designing  
CC therapeutics for the treatment and prevention of Alzheimer's disease,  
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis  
CC and neuronal loss. APP isoforms are also used in methods for identifying  
CC inhibitors and modulators of human Asp2 activity. The invention relates  
CC to a method for identifying agents that modulate the activity of human  
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
CC as a means to screen in cellular assays for the inhibitors of beta and  
CC gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in  
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.  
CC The present sequence is human aspartyl protease 2 (Hu-Asp2), a 'long'  
CC form designated as (Hu-Asp2a). Hu-Asp 2 gene is localised on chromosome  
CC 11q23.3-24.1  
XX  
XX SQ Sequence 501 AA;  
XX  
Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLSGLGAPVGL 41  
DB 22 TQHGIRLPRLSGLGAPVGL 41  
RESULT 114  
AAE02581  
ID AAE02581 standard; proteain; 501 AA.  
XX  
AC AAE02581;  
XX  
DT 10-AUG-2001 (first entry)  
XX  
DE Human aspartyl protease 2a (Asp 2a).  
XX  
KW Human; alpha-secretase; amyloid precursor protein; APP; therapy;  
KW Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp 2a;  
KW beta-secretase; chromosome 11q23.3-24.1.  
XX  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT Peptide 1..21  
FT /label= Signal\_peptide  
FT Protein 22..45  
FT /label= Asp\_2a\_prepropeptide  
FT Peptide 46..57  
FT /label= Asp\_2a\_propeptide  
FT Protein 58..501  
FT /label= Mature\_human\_Asp\_2a\_protein  
FT Active-site 93..95  
FT /label= Active\_site\_1  
FT Active-site 289..291  
FT /label= Active\_site\_2  
FT Region 420..454  
FT /label= Alpha\_helical\_spacer  
FT Domain 455..477  
FT /label= Transmembrane\_domain  
FT Domain 478..501  
FT /label= Cytoplasmic\_domain  
FT Region 486..501  
FT /note= "Peptide #2"  
XX  
XX W0200123533-A2.  
XX  
XX 05-APR-2001.  
XX  
PD 22-SEP-2000; 2000WO-US026080.  
XX  
PF 23-SEP-1999; 99US-0155493P.  
XX  
PR 23-SEP-1999; 99WO-US020881.



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PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
PA
XX Gurney M, Bienkowski MJ;
XX
XX WPI; 2001-290516/30.
DR N-PSDB; AAD06739.
XX
PT Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX protein, useful for the treatment of Alzheimer's disease.
PS
XX Example 2; Fig 2; 189pp; English.
XX
CC The present invention relates to enzymes for cleaving the alpha-
CC secretase site of the amyloid precursor protein (APP) and methods of
CC identifying those enzymes. The methods may be used to identify enzymes
CC that may be used to cleave the alpha-secretase cleavage site of the APP
CC protein. The enzymes may be used to treat or modulate the progress of
CC Alzheimer's disease. The present sequence is human aspartyl protease 2a
CC (Asp 2a). Asp 2a has beta-secretase protease activity. Asp2 gene is
CC located on chromosome 11q23.3-24.1
XX
SQ Sequence 501 AA;

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
   |||||
Db 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 115
AAU06603
ID AAU06603 standard; protein; 501 AA.
AC
XX AAU06603;
XX
DT 09-SEP-2004 (rev1bad)
DT 24-OCT-2001 (first entry)
XX
DE Human Aspartyl protease 2(a), Asp2(a).
XX
KW Human, Aspartyl protease; Asp2(a); beta-secretase; neurotropic;
KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
KW amyloid-beta; Abeta.
XX
XX Homo sapiens.
OS unidentified.
XX
XX Key
XX Peptide
FT 1..21 Location/Qualifiers
FT /label= Signal peptide
FT Peptide
FT 22..45 /label= Pre_pro_peptide
FT Peptide
FT 46..57 /label= Pro_peptide
FT Protein
FT 57..501 /label= Mature_Asp2(a)
FT Region
FT 420..454 /label= Alpha_helical_spacer_region
FT Domain
FT 455..477 /note = Transmembrane domain
FT /note = Transmembrane domain
FT 478..501 /note = Cytoplasmic domain
XX
XX MO200149098-A2.
XX
XX 12-JUL-2001.
XX

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PF 09-MAY-2001; 2001WO-1B000798.
XX
XX 09-MAY-2001; 2001WO-1B000798.
XX
XX (BIEN/) BIENKOWSKI M J.
PA (GURN/) GURNEY M E.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX
XX WPI; 2001-502549/55.
DR N-PSDB; AAS11517.
XX
XX
PT Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
PS Claim 49; Fig 2; 185pp; English.
XX
XX The invention relates to a purified polypeptide comprising a fragment of
XX mammalian aspartyl protease (Asp)2 protein which lacks the Asp2
XX transmembrane domain and the Asp2 protein, and where the polypeptide and
XX the fragment retain the beta-secretase activity of the mammalian Asp2
XX protein. The invention also details polynucleotides for the Asp proteins
XX and vectors expressing them, and a polypeptide (isoform of amyloid
XX protein precursor (APP)) comprising the amino acid sequence of an APP or
XX its fragment containing an APP cleavage site recognizable by a mammalian
XX beta-secretase, and further comprising two lysine residues at the
XX carboxyl terminus of the amino acid sequence of the mammalian APP or APP
XX fragment. Also included in the invention are methods of identifying
XX modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
XX useful for treating Alzheimer's disease. APP is useful in methods for
XX identifying inhibitors or modulators of human Asp2 activity and amyloid-
XX beta (Abeta) peptide production. APP is also useful in designing
XX compounds for the treatment or prevention of Alzheimer's disease. APP
XX associated with increased levels of Abeta processing (NLDA), which is
XX relating the Alzheimer's research. The expression vector is useful for
XX recombinantly expressing APP. Nucleic acids that hybridise to Asp
XX oligonucleotides are useful as probes or primers. The probes are useful
XX for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
XX Southern blots. The present sequence is human Asp2(a)
XX
CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key
CC
XX Sequence 501 AA;

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41
   |||||
Db 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 116
ABB06409
ID ABB06409 standard; protein; 501 AA.
AC
XX ABB06409;
XX
DT 31-MAY-2002 (first entry)
DT
XX
XX Human aspartyl protease protein sequence SEQ ID NO:2.
XX
XX Beta-secretase; enzyme; cleavage site; amyloid protein precursor; APP;
KW aspartyl protease; neuroprotective; neurotropic; beta-secretase inhibitor;
KW Alzheimer's disease.
XX

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OS Homo sapiens.  
XX  
XX WO200206306-A2.  
XX  
XX 24-JAN-2002.  
XX  
XX 19-JUL-2001; 2001WO-US023035.  
XX  
XX 19-JUL-2000; 2000US-0219795P.  
XX 12-MAR-2001; 2001US-0275251P.  
XX  
XX (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
XX  
XX Yan R. Tomasselli AG, Gurney ME, Emmons TL, Bienkowski MJ,  
XX Heinrichson RL;  
XX  
XX WPI; 2002-216995/27.  
XX N-PSDB; ABL49914.  
XX  
XX Novel substrates for human aspartyl protease useful for identifying  
XX modulators of beta secretase activity of aspartyl protease for treating  
XX Alzheimer's disease.  
XX  
XX Claim 63; Page 118-119; 188pp; English.  
XX  
XX The present invention describes an isolated peptide (I) comprising a  
XX sequence of at least four amino acids, where the peptide is a substrate  
XX for conducting aspartyl protease assays. (I) has neuroprotective and  
XX neurotropic activities, and can be used as an inhibitor of beta-secretase  
XX activity. A beta-secretase modulator from the present invention can be  
XX used for inhibiting beta-secretase activity in vivo, and in the  
XX manufacture of a medicament for the treatment of Alzheimer's disease.  
XX Pharmaceutical compositions from the present invention can be used for  
XX treating a disease or condition characterized by an abnormal beta-  
XX secretase activity. (II) is useful for identifying agents that modulate  
XX the activity of human Asp2 aspartyl protease (Hu-Asp2). (I) is useful as  
XX a core structure to construct derivatives. ABL49914 to ABL49925 and  
XX ABB06409 to ABB06593 represent sequences used in the exemplification of  
XX the present invention  
XX  
XX Sequence 501 AA;  
SQ  
Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLRSGLGAPLGL 41  
DB 22 TQHGIRLPRLRSGLGAPLGL 41  
RESULT 117  
ABG78374  
ID ABG78374 standard; protein; 501 AA.  
XX  
XX ABG78374;  
XX  
XX 15-NOV-2002 (first entry)  
XX  
XX Human prepromemapsin 2.  
XX  
XX Human; enzyme; memapsin 2; aspartic protease; beta secretase;  
XX degenerative disease; Alzheimer's disease; amyloid precursor protein;  
XX APP; neuroprotective; neurotropic; inhibitor;  
XX substrate side-chain preference.  
XX  
XX Homo sapiens.  
XX  
XX WO200253594-A2.  
XX  
XX 11-JUL-2002.  
XX  
XX 28-DEC-2001; 2001WO-US050826.  
PF

XX  
XX 28-DEC-2000; 2000US-0258705P.  
XX 14-MAR-2001; 2001US-0275756P.  
XX  
XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.  
XX (UNII ) UNIV ILLINOIS FOUND.  
XX  
XX Tang JUN, Koelach G, Ghosh AK;  
XX  
XX WPI; 2002-619088/66.  
XX  
XX New memapsin 2 activity inhibitor useful in treatment of e.g. Alzheimer's  
XX disease.  
XX  
XX Disclosure; Fig 9; 74pp; English.  
XX  
XX The invention relates to an inhibitor of catalytically active memapsin 2  
XX (an aspartic protease which can cleave at beta secretase sites), which  
XX binds to the active site of memapsin 2 defined by the presence of two  
XX catalytic aspartic residues and substrate binding cleft. Also included is  
XX a method of determination of the substrate binding cleft. Also included is  
XX memapsin 2 sub-sites comprising: (a) reacting a mixture of memapsin 2  
XX substrates with memapsin 2, and determining the sub-site preference of  
XX memapsin 2 by determining relative initial hydrolysis rates of the  
XX mixture of memapsin 2 substrates; or (b) preparing a combinatorial  
XX library of memapsin 2 inhibitors containing a base sequence taken from  
XX OM99-2 (Glu-Val-Asn-Leu-Ala-Ala-Glu-Phe), probing the library of  
XX inhibitors with memapsin 2 which binds to several inhibitors to generate  
XX several bound memapsin 2, and detecting the bound memapsin 2 with an  
XX antibody raised to memapsin 2 and an alkaline phosphatase conjugated  
XX secondary antibody. The inhibitors may be used in the manufacture of a  
XX medicament for the treatment of Alzheimer's disease since memapsin 2 may  
XX be involved in the cleavage of amyloid precursor protein (APP), and for  
XX determining the substrate side-chain preference in memapsin 2 sub-sites.  
XX The present sequence represents human memapsin 2 (either prepromemapsin 2  
XX or mature memapsin)  
XX  
XX Sequence 501 AA;  
SQ  
Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLRSGLGAPLGL 41  
DB 22 TQHGIRLPRLRSGLGAPLGL 41  
RESULT 118  
ABB78590  
ID ABB78590 standard; protein; 501 AA.  
XX  
XX ABB78590;  
XX  
XX 16-JUL-2002 (first entry)  
XX  
XX Human Asp-2(a) protein sequence SEQ ID NO:4.  
XX  
XX Human; Asp-1; Asp-2; aspartyl protease; enzyme; Alzheimer's disease;  
XX proteolytic; chromosome 11q23.3-24.1.  
XX  
XX Homo sapiens.  
XX  
XX GB2367060-A.  
XX  
XX 27-MAR-2002.  
XX  
XX 29-OCT-2001; 2001GB-00025934.  
XX  
XX 23-SEP-1999; 99US-00404133.  
XX 23-SEP-1999; 99US-0155493P.  
XX 23-SEP-1999; 99WO-US020881.  
XX 13-OCT-1999; 99US-00416901.  
PR

PR 06-DEC-1999; 99US-0169232P.  
 PR 22-SEP-2000; 2000GB-00023315.  
 XX  
 PA (PHAA ) PHARMACIA & UPJOHN CO.  
 XX  
 PI Bienkowskaki MJ, Gurney M;  
 XX  
 DR WPI; 2002-397167/43.  
 DR N-PSDB; ABLS2457.  
 XX  
 PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.  
 XX  
 PS Example 2; Fig 2; 182pp; English.  
 XX  
 CC The present invention describes a human aspartyl protease 1 (hu-Asp1)  
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,  
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1  
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a  
 CC nucleotide sequence that hybridises under stringent conditions to the non  
 CC -coding strand complementary to a defined 1804 nucleotide sequence (see  
 CC ABLS2456) where the nucleotide sequence encodes a polypeptide having Asp1  
 CC proteolytic activity and lacks nucleotides encoding a transmembrane  
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that  
 CC hybridises under stringent conditions to (III) (the nucleotide sequence  
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding  
 CC to amino acids 23-62 of hu-Asp1 (see ABBS589)); (4) a vector (IV)  
 CC comprising (III) or (III') and (5) a host cell (V) transformed or  
 CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease  
 CC substrate (I) may be used as an enzyme substrate in assays to detect  
 CC aspartyl protease activity, (II) and therefore diagnose diseases  
 CC associated with aberrant hu-Asp1 expression and activity such as  
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
 CC sequence represents hu-Asp2(a) from the present invention  
 CC  
 SQ Sequence 501 AA;  
 Query Match 100.0%; Score 104; DB 1; Length 501;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 22 TOHGIRLPRLRSGLGAPLGL 41  
 DB 22 TOHGIRLPRLRSGLGAPLGL 41  
 RESULT 119  
 ABPS9564  
 ID ABPS9564 standard; protein; 501 AA.  
 XX  
 AC ABPS9564;  
 XX  
 DT 11-AUG-2003 (first entry)  
 XX  
 DE Human Asp2 protein.  
 XX  
 KW Human; ASP2; Alzheimer's disease; transgenic; animal model.  
 XX  
 OS Homo sapiens.  
 XX  
 PN EP1285578-A2.  
 XX  
 PD 26-FEB-2003.  
 XX  
 PF 20-AUG-2002; 2002EP-00078428.  
 XX  
 PR 21-AUG-2001; 2001GB-00020342.  
 XX  
 PR 07-NOV-2001; 2001GB-00026723.  
 XX

PA (SMIK ) SMITHKLINE BEECHAM PLC.  
 XX  
 XX Geppert M, Harper AJ, Harrison SM, Prosser H;  
 PI  
 XX  
 DR WPI; 2003-344707/33.  
 XX  
 PT New recombinant DNA construct comprising a brain-specific calcium  
 PT calmodulin kinase promoter sequence operably linked to a sequence  
 PT encoding a human ASP2, for making animal models for screening agents to  
 PT treat Alzheimer's disease.  
 XX  
 PS Claim 1; Page 12; 15pp; English.  
 XX  
 CC The present invention relates to the human ASP2 protein and coding  
 CC sequences. It also describes a fusion coding sequence where the ASP2  
 CC coding sequence is linked to a brain-specific calcium calmodulin kinase  
 CC promoter, and an animal model containing this sequence. The recombinant  
 CC construct is useful in generating a transgenic animal model for screening  
 CC agents which can be used in the treatment of neurological disorders,  
 CC particularly Alzheimer's disease. The transgenic animal or cells may be  
 CC used to screen for therapeutic agents, which inhibit the activity of  
 CC ASP2, and consequently the processing of APP and amyloid deposits. The  
 CC present sequence is the human ASP2 protein  
 CC  
 SQ Sequence 501 AA;  
 Query Match 100.0%; Score 104; DB 1; Length 501;  
 Best Local Similarity 100.0%; Pred. No. 33;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 22 TOHGIRLPRLRSGLGAPLGL 41  
 DB 22 TOHGIRLPRLRSGLGAPLGL 41  
 RESULT 120  
 ABR61928  
 ID ABR61928 standard; protein; 501 AA.  
 XX  
 AC ABR61928;  
 XX  
 DT 12-SEP-2003 (first entry)  
 XX  
 DE Human memapsin 2 protein.  
 XX  
 KW Memapsin 1; nootropic; neuroprotective; memapsin 2; beta secretase;  
 KW beta-amyloid protein; Alzheimer's disease; human; enzyme.  
 XX  
 OS Homo sapiens.  
 XX  
 FH  
 FH Key location/Qualifiers  
 FT Peptide 1..21  
 FT /note= "signal peptide"  
 FT Protein 22..501  
 FT /note= "mature protein"  
 FT Peptide 22..45  
 FT /note= "propeptide"  
 FT Domain 455..480  
 FT /note= "transmembrane domain"  
 XX  
 PN WO2003039454-A2.  
 XX  
 PD 15-MAY-2003.  
 XX  
 PF 23-OCT-2002; 2002WO-US034324.  
 XX  
 PR 23-OCT-2001; 2001US-0335952P.  
 PR 27-NOV-2001; 2001US-033545P.  
 PR 14-JAN-2002; 2002US-0348464P.  
 PR 14-JAN-2002; 2002US-0348615P.  
 PR 20-JUN-2002; 2002US-0390804P.  
 PR 19-JUL-2002; 2002US-0397557P.  
 PR 19-JUL-2002; 2002US-0397619P.  
 PR

XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.  
PA (UNIT ) UNIV ILLINOIS FOUND.  
XX Ghosh AK, Tang J, Bilcer G, Chang W, Hong L, Koelsch G, Loy J,  
PI Turner RT;  
XX MPI: 2003-541410/51.  
DR N-PSDB; ACC84849.  
XX  
PT New peptide compounds are memapsin beta secretase inhibitors used for  
PT treating Alzheimer's disease.  
XX  
PS Claim 98; Fig 9; 407pp; English.  
XX  
CC The invention relates to peptide compounds of specified formula. The  
CC compounds exhibit memapsin 2-beta secretase inhibitory activity relative  
CC to memapsin 1-beta secretase and reduce the accumulation of beta-amyloid  
CC protein. The compounds can be used for treating Alzheimer's disease. The  
CC present sequence represents a human memapsin 2 protein (Genbank Index  
CC (GI):6912266)  
XX  
SQ Sequence 501 AA;  
XX  
Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. NO. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
XX  
QY 22 TQHGIRLPRLRSGLGAPLGL 41  
DB 22 TQHGIRLPRLRSGLGAPLGL 41  
XX  
RESULT 121  
ADC81560  
ID ADC81560 standard; protein; 501 AA.  
XX  
AC ADC81560;  
XX 01-JAN-2004 (first entry)  
XX  
XX Human BACE amino acid sequence SEQ ID NO:1.  
XX  
XX human; BACE; modification; Pro33lys; pro-enzyme.  
XX  
OS Homo sapiens.  
XX  
XX MO2003072733-A2.  
XX  
PD 04-SEP-2003.  
XX  
XX 21-FEB-2003; 2003WO-US005508.  
XX  
XX 21-FEB-2002; 2002US-0358651P.  
XX  
XX (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
XX Chou K, Howe JW;  
XX  
XX MPI: 2003-712719/67.  
XX  
XX BACE polypeptides having Pro33lys modification, useful in determining  
XX possible mutations, which will inhibit enzyme activity, and in  
XX determining potential active site for target molecules.  
XX  
XX Example 1; SEQ ID NO 1; 38pp; English.  
XX  
XX The present invention describes an isolated polypeptide (1) comprising or  
XX consisting of a fully defined sequence of 432 amino acids (see ADC81561),  
XX and comprising human BACE having the modification Pro33lys. Also  
XX described: (1) a composition comprising an active human BACE enzyme  
XX comprising the pro-enzyme sequence of BACE having the modification  
XX Pro33lys; (2) an isolated polynucleotide comprising a sequence encoding

CC (1); (3) an isolated polynucleotide consisting or comprising of  
CC nucleotides 70-1365 of a 1355-bp sequence (see ADC81562); (4) an  
CC expression vector comprising the polynucleotide of (2), or a  
CC polynucleotide sequence encoding a Pro33lys-BACE polypeptide, where the  
CC expression vector can produce the Pro33lys-BACE polypeptide when present  
CC in a compatible host cell, when cultured under conditions that allow  
CC production; (5) a recombinant host cell comprising the expression vector;  
CC and (6) producing a (active) Pro33lys-BACE polypeptide. The BACE  
CC polypeptide having Pro33lys modification may be used in determining  
CC possible mutations, which will inhibit enzyme activity, and in  
CC determining potential active site for target molecules. The vector  
CC comprising the BACE polynucleotide is useful for producing recombinant  
CC BACE polypeptides having Pro33lys modification. The present sequence  
CC represents the human BACE amino acid sequence used in the exemplification  
CC of the present invention.  
XX  
SQ Sequence 501 AA;  
XX  
Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. NO. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
XX  
QY 22 TQHGIRLPRLRSGLGAPLGL 41  
DB 22 TQHGIRLPRLRSGLGAPLGL 41  
XX  
RESULT 122  
ADL18184  
ID ADL18184 standard; protein; 501 AA.  
XX  
AC ADL18184;  
XX 06-MAY-2004 (first entry)  
XX  
XX Human APP beta-secretase protein SEQ ID NO:104.  
XX  
XX chimeric protein; signal protein; trafficking signal targeting;  
XX proteolytic cleavage site; protease; protease inhibitor; enzyme; human;  
XX APP beta-secretase.  
XX  
XX Homo sapiens.  
XX  
XX MO2003014381-A1.  
XX  
PD 20-FEB-2003.  
XX  
XX 08-AUG-2002; 2002WO-KR001515.  
XX  
XX 10-AUG-2001; 2001KR-00048123.  
XX  
XX (AHRA-) AHRAM BIOSYSTEMS INC.  
XX  
XX Hwang I, Kim DH, Lee YJ;  
XX  
XX MPI: 2003-256596/25.  
XX  
XX N-PSDB; ADL18183.  
XX  
XX New chimeric protein, useful for detecting protease inhibitors inside the  
XX cell or tissue.  
XX  
XX Disclosure; SEQ ID NO 104; 214pp; English.  
XX  
XX The present invention describes a chimeric protein comprising at least  
XX one signal protein that has a trafficking signal targeting to a  
XX subcellular organelle and at least one proteolytic cleavage site for a  
XX protease. The chimeric protein is constructed, so that: (a) the  
XX trafficking signals of all the signal proteins are inactivated by linking  
XX the proteolytic site or a signal masking protein through the proteolytic  
XX site to the N-or C- terminus of the signal proteins, and so the chimeric  
XX protein is present in cytosol; (b) the trafficking signal of at least one  
XX signal protein is activated when the proteolytic cleavage site is cleaved  
XX by the protease, and as a result at least one fragment protein that

CC includes the activated signal protein is a transported to a subcellular  
CC organelle; and (c) the chimeric protein is labelled with at least one  
CC fluorescent protein and the position and intensity distribution of the  
CC fluorescent label signal in the cell is altered depending on the cleavage  
CC by the protease. Also described: (1) a recombinant gene comprising a  
CC nucleic acid sequence encoding the chimeric protein which is constructed  
CC to express the chimeric protein in a cell; (2) a cell transformed with  
CC the recombinant gene or vector; (3) analysing the activity of a protease  
CC in vivo; (4) screening protease inhibitors in vivo; (5) a system for  
CC detecting a protease inside a cell; (6) a nucleic acid comprising the  
CC sequence encoding the chimeric protein for detecting protease activity in  
CC a cell; (7) a vector comprising the nucleic acid; (8) a kit for detecting  
CC a protease inside a cell comprising the chimeric protein or the vector;  
CC (9) detecting a protease inside a cell or tissue; and (10) detecting a  
CC protease inhibitor in vivo. The chimeric protein is useful for detecting  
CC a protease inhibitor inside the cell or tissue. The present sequence  
CC represents a human APP beta-secretase, which is used in the  
CC exemplification of the present invention.

SQ Sequence 501 AA;

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGIGAPLGL 41  
DB 22 TQHGIRLPURSGIGAPLGL 41

RESULT 123

ADG86751  
ID ADG86751 standard; protein; 501 AA.

AC ADG86751;

DT 11-MAR-2004 (first entry)

XX Human APP-cleaving enzyme.

XX enzyme; human; beta-site amyloid precursor protein; APP-cleaving enzyme;  
XX amyloid deposition; neurodegeneration; Alzheimer's disease; infection;  
XX inflammation; tumour.

OS Homo sapiens.

XX US2003224512-A1.

XX 04-DEC-2003.

XX 31-MAY-2002; 2002US-00159942.

XX 31-MAY-2002; 2002US-00159942.

XX (ISIS-) ISIS PHARM INC.

XX Dobie KM;

XX WPI: 2004-051909/05.

XX N-PSDB; ADG86621.

XX New antisense compound targeted to a nucleic acid molecule encoding a  
XX beta-site amyloid precursor protein (APP)-cleaving enzyme, useful for  
XX treating diseases associated with beta-site APP-cleaving enzyme, e.g.  
XX neurodegeneration.

XX Disclousure; SEQ ID NO 134; 58pp; English.

XX The invention relates to a compound targeted to a nucleic acid molecule  
XX encoding a beta-site amyloid precursor protein (APP)-cleaving enzyme. The  
XX antisense oligonucleotides and compounds are useful for inhibiting the  
XX expression of beta-site amyloid precursor protein (APP)-cleaving enzyme,  
XX modulating amyloid deposition in neurons, altering the expression of a

CC splice variant of beta-site APP-cleaving enzyme, and for treating  
CC diseases or conditions associated with expression of beta-site APP-  
CC cleaving enzyme e.g. neurodegeneration or Alzheimer's disease. The  
CC antisense compounds are also useful as research reagents and kits, or in  
CC diagnostic, therapeutic and prophylaxis applications, e.g. to prevent or  
CC delay infection, inflammation or tumour formation. The present sequence  
CC represents the amino acid sequence of the human APP-cleaving enzyme.

SQ Sequence 501 AA;

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPURSGIGAPLGL 41  
DB 22 TQHGIRLPURSGIGAPLGL 41

RESULT 124

ADJ94316  
ID ADJ94316 standard; protein; 501 AA.

AC ADJ94316;

DT 03-JUN-2004 (first entry)

XX Human aspartyl protease 2a, Asp-2a.

XX Human; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);  
XX beta secretase; amyloid protein precursor; APP; Alzheimer's disease;  
XX neurotropic; neuroprotective; amyloid beta.

OS Homo sapiens.

XX US6706485-B1.

XX 16-MAR-2004.

XX 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 13-OCT-1999; 99MO-US020881.

XX (PFAA ) PHARMACIA &amp; UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI: 2004-236722/22.

XX N-PSDB; ADJ94315.

XX Identifying agents that modulate activity of Asp2 aspartyl protease  
XX useful for treating or preventing Alzheimer's disease involves comparing  
XX APP processing activity of protease in presence and absence of test  
XX agent.

XX Example 2; SEQ ID NO 4; 109pp; English.

XX The invention relates to identifying agents that modulate activity of  
XX Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
XX encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
XX precursor protein (APP) in the presence and absence of a test agent,  
XX where Asp2 is a recombinant polypeptide and processes APP into amyloid  
XX beta, determining APP processing activity of Asp2 in presence and absence  
XX of the test agent, and comparing the activities to identify agents that  
XX modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
XX for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
XX nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
XX the vector and the method of producing Hu-Asp polypeptide, an isolated  
XX antibody that specifically binds to Hu-Asp polypeptides, identifying a

CC cell that can be used to screen for inhibitors of beta secretase  
CC activity, novel isoforms of amyloid protein precursor (APP), where the  
CC last 2 carboxy terminus amino acids of that isoform are both lysine  
CC residues (e.g. those designated APP695-KK or carrying the Swedish  
CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw  
CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
CC for assaying for beta secretase activity and screening for inhibitors of  
CC beta-secretase) and polynucleotides that encode the APP proteins. The  
CC method is useful for identifying agents that modulate the activity  
CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
CC protease. Preferably, the method is useful for identifying agents that  
CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
CC precursor protein processing, are useful for treating or preventing  
CC Alzheimer's disease. The present sequence represents an aspartyl protease  
CC of the invention.  
XX  
SQ Sequence 501 AA;  
Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLRSGLGAPLGL 41  
Db 22 TQHGIRLPRLRSGLGAPLGL 41  
RESULT 125  
AD050412  
ID AD050412 standard; protein; 501 AA.  
XX  
AC ADO50412;  
XX  
DT 29-JUN-2004 (first entry)  
XX  
DE Human aspartyl protease (Asp)-2(a).  
XX  
KW Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;  
KW Alzheimer's disease; gene therapy; human; enzyme.  
XX  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT Peptide 1..21  
FT Protein /label= Signal\_peptide  
FT Protein 22..501  
FT Protein /note= "Human mature aspartyl protease (Asp)-2"  
FT Domain 455..477  
FT Domain /note = Transmembrane domain  
FT Domain 478..501  
FT Domain /note = Cytoplasmic domain  
XX  
PN US6737510-B1.  
XX  
PD 18-MAY-2004.  
XX  
PF 12-APR-2000; 2000US-00548373.  
XX  
PR 24-SEP-1998; 98US-0101594P.  
PR 23-SEP-1999; 99US-0040413P.  
PR 23-SEP-1999; 99US-0155493P.  
PR 23-SEP-1999; 99WO-US020881.  
PR 13-OCT-1999; 99US-00416901.  
XX  
PA (PHAA) PHARMACIA & UPJOHN CO.  
PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
XX  
DR WPI; 2004-387112/36.  
DR N-PSDB; ADO50411.  
XX  
PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG  
PT involved in processing amyloid precursor protein into amyloid beta,

PT useful in preparing a composition for treating or preventing Alzheimer's  
PT disease.  
PS Example 2; SEQ ID NO 4; 108bp; English.  
XX  
XX The invention relates to a method for identifying an agent that decreases  
CC the protease activity of the aspartyl protease (APP) polypeptide. It also  
CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
CC cleavage site of the amyloid precursor protein (APP). The invention is  
CC useful in preparing a composition for treating or preventing Alzheimer's  
CC disease. It is also useful in gene therapy. The present sequence is human  
CC Asp-1 protein. This sequence is used to illustrate the method of the  
CC invention.  
XX  
SQ Sequence 501 AA;  
Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLRSGLGAPLGL 41  
Db 22 TQHGIRLPRLRSGLGAPLGL 41  
RESULT 126  
AD017468  
ID AD017468 standard; protein; 501 AA.  
XX  
AC AD017468;  
XX  
DT 26-AUG-2004 (first entry)  
XX  
DE Human soft tissue sarcoma-upregulated protein - SEQ ID 285.  
XX  
KW soft tissue sarcoma; cytoskeletal; gene therapy; vaccine; screening; human.  
XX  
OS Homo sapiens.  
XX  
FN WO2004048938-A2.  
XX  
PD 10-JUN-2004.  
XX  
PE 26-NOV-2003; 2003WO-US038193.  
XX  
PR 26-NOV-2002; 2002US-0429739P.  
XX  
PA (PROT-) PROTEIN DESIGN LABS INC.  
XX  
PI Aziz N, Ginsburg WM, Zlotnick A;  
XX  
DR WPI; 2004-441208/41.  
XX  
PT Early detection of soft tissue sarcoma comprises determining expression  
PT of a gene in a first soft tissue sample and a normal soft tissue sample  
PT and comparing the gene expression, also useful in treating soft tissue  
PT sarcoma.  
XX  
PS Example 2; SEQ ID NO 285; 210bp; English.  
XX  
XX The invention relates to a novel method for detecting soft tissue sarcoma  
CC which comprises obtaining a first soft tissue sample from an individual  
CC and a normal soft tissue sample from the same or different individual,  
CC determining the expression of a gene in both samples and comparing the  
CC expression of the gene in both soft tissue samples, where a higher level  
CC of protein expression in the first soft tissue sample indicates the  
CC presence of soft tissue sarcoma. The method of the invention has  
CC cyrostatic applications and may be useful for detecting soft tissue  
CC sarcoma, possibly via gene therapy or vaccine production. The nucleic  
CC acid sequences may be useful in diagnostic and screening applications.  
CC The current sequence is that of a human soft tissue sarcoma-upregulated  
CC protein of the invention. The current sequence is not shown within the  
CC specification per se but was submitted in CD format by the inventor.

XX SQ Sequence 501 AA;  
Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLRSGLGAPLGL 41  
DB 22 TQHGIRLPRLRSGLGAPLGL 41  
RESULT 127  
ADP83876  
ID ADP83876 standard; protein; 501 AA.  
XX  
AC ADP83876;  
XX  
DT 23-SEP-2004 (first entry)  
XX  
DE Human BACE1 amino acid sequence SEQ ID NO:1.  
XX  
KW human; beta-site amyloid precursor protein cleaving enzyme 1;  
KW beta-site APP cleaving enzyme 1; BACE1; BACE1 isoform A; chromosome 11;  
KW prodomain; engineered cleavage site; protease domain; neuroprotective;  
KW neurotropic; gene therapy; Alzheimer's disease; Down's syndrome.  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT Region 22..446  
FT /note= "mentioned in claim 14"  
FT Region 22..45  
FT /note= "mentioned in claim 13"  
FT Region 22..41  
FT /note= "mentioned in claim 12"  
FT Region 74..446  
FT /note= "mentioned in claim 4"  
XX  
PN WO2004056962-A2.  
XX  
PD 08-JUL-2004.  
XX  
PF 02-DEC-2003; 2003WO-US038314.  
XX  
PR 04-DEC-2002; 2002US-0430984P.  
XX  
PA (SUNE-) SUNESIS PHARM INC.  
XX  
PI Ballinger M;  
XX  
DR WPI; 2004-507703/48.  
XX  
PT New polypeptides for producing homogenously processed preparations of  
PT beta site amyloid precursor protein-cleaving enzyme comprises a  
PT prodomain, an engineered cleavage site and a protease domain.  
XX  
PS Claim 4; SEQ ID NO 1; 40pp; English.  
XX  
CC The present invention describes a polypeptide (1) comprising in order  
CC from the N-terminus to the C-terminus: (a) a prodomain comprising at  
CC least 6 contiguous amino acids of the 16 amino acid sequence of SEQ ID  
CC NO:3 (ADP83877, comprising residues 22-37 of SEQ ID NO:1 (ADP83876) which  
CC is the longest isoform of human beta-site amyloid precursor protein (APP)  
CC cleaving enzyme 1 (BACE1), isoform A); (b) an engineered cleavage site;  
CC and (c) a protease domain. (1) is capable of being cleaved at the  
CC engineered cleavage site, and so releases a free protease domain that has  
CC BACE1 activity. Also described: (1) a nucleic acid sequence encoding (1);  
CC (2) a vector for expression of (1); and (3) a host cell expressing (1);  
CC (1) has neuroprotective and neurotropic activities, and can be used in gene  
CC therapy. (1) can be used for producing preparations of homogenously  
CC processed BACE that may be used for e.g. studying or treating diseases  
CC such as Alzheimer's disease or Down's syndrome. The human BACE1 gene is

CC located on chromosome 11, more specifically to 11q23.2-23.3. The present  
CC sequence represents human BACE1 isoform A, which is used in the  
CC exemplification of the present invention.  
XX  
SQ Sequence 501 AA;  
Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLRSGLGAPLGL 41  
DB 22 TQHGIRLPRLRSGLGAPLGL 41  
RESULT 128  
ADR75325  
ID ADR75325 standard; protein; 501 AA.  
XX  
AC ADR75325;  
XX  
DT 18-NOV-2004 (first entry)  
XX  
DE Human aspartyl protease (Asp)-2(a) enzyme.  
XX  
KW Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;  
KW chromosome identification; Alzheimer's disease; human; enzyme.  
XX  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT Peptide 1..21  
FT /label= "Signal\_peptide"  
FT Protein 22..501  
FT /note= "Human mature aspartyl protease (Asp)-2"  
FT Domain 455..477  
FT /note= "Transmembrane domain"  
FT Domain 478..501  
FT /note= "Cytoplasmic domain"  
XX  
PN US200416507-A1.  
XX  
PD 26-AUG-2004.  
XX  
PF 29-AUG-2003; 2003US-00652045.  
XX  
PR 24-SEP-1998; 98US-0101594P.  
PR 23-SEP-1998; 99US-0040413P.  
PR 23-SEP-1999; 99US-0155493P.  
PR 13-OCT-1999; 99US-00416901.  
XX  
PA (GURN/) GURNEY M E.  
PA (BIEN/) BIENKOMAKI M J.  
PA (HEIN/) HEINRIKSON R L.  
PA (PARO/) PARODI L A.  
PA (YANR/) YAN R.  
XX  
PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
XX  
DR WPI; 2004-624916/60.  
DR N-PEDB; ADR75324.  
XX  
PT Novel purified/isolated polynucleotide encoding polypeptide having  
PT aspartyl protease activity involved in processing amyloid precursor  
PT protein into amyloid beta, useful in identifying agent decreasing  
PT activity of aspartyl protease.  
XX  
PS Claim 1; SEQ ID NO 4; 107pp; English.  
XX  
CC The invention relates to nucleic acid sequences encoding aspartyl  
CC protease (Asp) polypeptides having aspartyl protease activity involved in  
CC processing amyloid precursor protein (APP) into amyloid beta. The  
CC invention also relates to a method for identifying an agent that



CC decreases the protease activity of the Asp. Asp DNA is useful in  
CC chromosome identification as they can hybridise with a specific location  
CC on a human chromosome and in identifying the relationship between genes  
CC and diseases (particular gene responsible for causing diseases). It is  
CC also useful for identifying candidates to modulate the progression of  
CC Alzheimer's disease. Asp is useful in raising antibodies that are useful  
CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The  
CC present sequence is the human Asp-2(a) enzyme. This sequence is used to  
CC illustrate the method of the invention.

XX Sequence 501 AA;

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41  
DB 22 TONGIRLPLRSGLGAPLGL 41

RESULT 129

AAB61335

ID AAB61335 standard; protein; 503 AA.

AC AAB61335;

DT 02-APR-2001 (first entry)

DE T7 promoter and vector sequence.

KM Memapsin 2; catalyst; Alzheimer's.

OS Homo sapiens.

OS Synthetic.

PN WO200100663-A2.

PD 04-JAN-2001.

PF 27-JUN-2000; 2000WO-US017661.

PR 28-JUN-1999; 99US-0141363P.

PR 30-NOV-1999; 99US-0168060P.

PR 25-JAN-2000; 2000US-0177836P.

PR 27-JUN-2000; 2000US-0178368P.

PR 08-JUN-2000; 2000US-0210292P.

PA (OKLA-) OKLAHOMA MEDICAL RES FOUND.

PI Tang JUN, Lin X, Koelsch G;

DR WPI; 2001-102885/11.

PT Purified recombinant catalytically active memapsin 2, used to screen

PT inhibitors of it, which are used to treat and prevent Alzheimer's

PS disease.

PS Disclosure; Fig 1; 86pp; English.

XX The present invention relates to a purified recombinant catalytically

XX active memapsin 2. The invention may be used for isolating inhibitors

XX which are used to treat or prevent Alzheimer's disease. The invention may

XX also be used to screen for individuals more genetically prone to develop

XX Alzheimer's disease

XX Sequence 503 AA;

DB 24 TONGIRLPLRSGLGAPLGL 43  
|||||

RESULT 130

AAB6573

ID AAB6573 standard; protein; 503 AA.

AC AAB6573;

DT 12-APR-2001 (first entry)

DE Human pro-memapsin 2.

KM Human, memapsin 2; nootropic; neuroprotective; amyloid precursor protein;

KM App; memapsin 2 inhibitor; Alzheimer's disease; ss.

OS Homo sapiens.

PN WO200100665-A2.

PD 04-JAN-2001.

PF 27-JUN-2000; 2000WO-US017742.

PR 28-JUN-1999; 99US-0141363P.

PR 30-NOV-1999; 99US-0168060P.

PR 25-JAN-2000; 2000US-0177836P.

PR 27-JUN-2000; 2000US-0178368P.

PR 08-JUN-2000; 2000US-0210292P.

PA (OKLA-) OKLAHOMA MEDICAL RES FOUND.

PI (UNIT ) UNIT ILLINOIS FOUND.

PI Tang JUN, Hong L, Ghosh AK;

DR WPI; 2001-137933/14.

PT Novel memapsin 2 inhibitors which bind to active site of memapsin 2

PT having 2 catalytic aspartic residues and substrate binding cleft, used to

PT treat Alzheimer's disease by blocking amyloid precursor protein cleavage.

PS Example 4; Fig 1; 86pp; English.

XX The present sequence is given in a specification relating to an inhibitor

XX of catalytically active memapsin 2. The inhibitor binds to the memapsin 2

XX active site, which is defined by the presence of two catalytic aspartic

XX residues and a substrate binding cleft. The inhibitor is useful for the

XX treatment and diagnosis of Alzheimer's disease. It is useful in screens

XX for individuals with a genetic predisposition to Alzheimer's disease. The

XX inhibitor is useful as a reagent for specifically binding to memapsin 2

XX or memapsin 2 analogues and for aiding in memapsin 2 isolation,

XX purification and characterisation

XX Sequence 503 AA;

Query Match 100.0%; Score 104; DB 1; Length 503;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41  
DB 24 TONGIRLPLRSGLGAPLGL 43

RESULT 131

ABG78373

ID ABG78373 standard; protein; 503 AA.

AC ABG78373;

DT 29-AUG-2003 (revised)

DT 15-NOV-2002 (first entry)

```

XX DE Human prepromemapsin 2/plasmid derived sequence.
XX KM Human; enzyme; memapsin 2; aspartic protease; beta secretase;
XX KW degenerative disease; Alzheimer's disease; amyloid precursor protein;
XX KM APP; neuroprotective; nontropic; inhibitor;
XX KM substrate side-chain preference.
XX OS Homo sapiens.
XX OS Enterobacteria phage T7.
XX PN WO200253594-A2.
XX PD 11-JUL-2002.
XX PF 28-DEC-2001; 2001MO-US050826.
XX PR 28-DEC-2000; 2000US-0258705P.
XX PR 14-MAR-2001; 2001US-025756P.
XX PA (OKLA-) OKLAHOMA MEDICAL RES FOUND.
XX PA (UNIT ) UNIV ILLINOIS FOUND.
XX PI Tang JUN, Koelsch G, Ghosh AK;
XX DR WPI; 2002-619088/66.
XX PT New memapsin 2 activity inhibitor useful in treatment of e.g. Alzheimer's
XX PS disease.
XX PS Disclosure; Fig 8; 74pp; English.
XX CC The invention relates to an inhibitor of catalytically active memapsin 2
XX CC (an aspartic protease which can cleave at beta secretase sites), which
XX CC binds to the active site of memapsin 2 defined by the presence of two
XX CC catalytic aspartic residues and substrate binding cleft. Also included is
XX CC a method of determination of the substrate side-chain preference in
XX CC memapsin 2 sub-sites comprising: (a) reacting a mixture of memapsin 2
XX CC substrates with memapsin 2, and determining the sub-site preference of
XX CC memapsin 2 by determining relative initial hydrolysis rates of the
XX CC mixture of memapsin 2 substrates; or (b) preparing a combinatorial
XX CC library of memapsin 2 inhibitors containing a base sequence taken from
XX CC OM99-2 (Glu-Val-Ala-Leu-Ala-Ala-Glu-Phe), probing the library of
XX CC inhibitors with memapsin 2 which binds to several inhibitors to generate
XX CC several bound memapsin 2, and detecting the bound memapsin 2 with an
XX CC antibody raised to memapsin 2, and an alkaline phosphatase conjugated
XX CC secondary antibody. The inhibitors may be used in the manufacture of a
XX CC medicament for the treatment of Alzheimer's disease since memapsin 2 may
XX CC be involved in the cleavage of amyloid precursor protein (APP), and for
XX CC determining the substrate side-chain preference in memapsin 2 sub-sites.
XX CC The present sequence represents human prepromemapsin 2 fused to vector
XX CC derived sequences. (Updated on 29-AUG-2003 to standardise OS field)
XX SQ Sequence 503 AA;

Query Match 100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TQHGIRLPISGCGAPLGL 41
DB 24 TQHGIRLPISGCGAPLGL 43

RESULT 132
AAU99489
ID AAU99489 standard; protein; 503 AA.
XX AAU99489;
XX 07-OCT-2002 (first entry)
XX Pro-memapsin 2 encoded by plasmid construct pET-11a-memapsin 2.

```

```

XX XX Human; memapsin 2; beta secretase; aspartic protease; APP;
XX KM beta-amyloid precursor protein; amyloid plaque; Alzheimer's disease;
XX KM neuroprotective; nontropic; enzyme; mutant; mutein.
XX OS Homo sapiens.
XX OS Synthetic.
XX PN US2002049303-A1.
XX PD 25-APR-2002.
XX PF 28-FEB-2001; 2001US-00796264.
XX PR 28-JUN-1999; 99US-0141363P.
XX PR 30-NOV-1999; 99US-0168086P.
XX PR 25-JAN-2000; 2000US-0177836P.
XX PR 27-JAN-2000; 2000US-0178368P.
XX PR 27-JUN-2000; 2000US-00604608.
XX PA (TANG/) TANG J J N.
XX PA (LINX/) LIN X.
XX PA (KOEL/) KOELSCH G.
XX PA (HONG/) HONG L.
XX PI Tang JUN, Lin X, Koelsch G, Hong L;
XX DR WPI; 2002-507280/54.
XX PT New recombinant catalytically active memapsin 2, useful to screen for
XX PS inhibitors of memapsin 2 which can be used to prevent and treat
XX PT Alzheimer's disease.
XX PS Example 3; Fig 1; 44pp; English.
XX CC The present invention relates to methods for the production of purified,
XX CC recombinant catalytically active, memapsin 2 (beta secretase). Memapsin
XX CC 2, a member of the aspartic protease family, cleaves beta-amyloid
XX CC precursor protein (APP) found in amyloid plaques. The recombinant
XX CC memapsin 2 is useful for identifying inhibitors of memapsin 2 in the
XX CC design of drugs for the treatment and/or prevention of Alzheimer's
XX CC disease. The recombinant memapsin 2 can be used to immunise against
XX CC Alzheimer's disease. The present sequence represents pro-memapsin 2
XX CC encoded by plasmid construct pET-11a-memapsin 2
XX SQ Sequence 503 AA;

Query Match 100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 33;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TQHGIRLPISGCGAPLGL 41
DB 24 TQHGIRLPISGCGAPLGL 43

RESULT 133
ABG76102
ID ABG76102 standard; protein; 503 AA.
XX ABG76102;
XX 01-MAY-2003 (first entry)
XX Human memapsin 2/T7 fusion protein.
XX DE Human memapsin 2/T7 fusion protein.
XX KW Human; memapsin 2; beta-secretase; beta-amyloid precursor protein;
XX KW beta-amyloid peptide; Alzheimer's disease; nontropic; neuroprotective;
XX KM enzyme; T7.
XX OS Homo sapiens.
XX OS Enterobacteria phage T7.
XX OS Synthetic.

```

```

XX Key Location/Qualifiers
FH Peptide 1..15
FT /note= "Vector derived (T7) residues"
FT Protein 16..503
FT /label= Memapsin_2
XX
PN US2002164760-A1.
XX
XX 07-NOV-2002.
XX
XX 28-FEB-2001; 2001US-00795903.
XX
XX 28-JUN-1999; 99US-0141363P.
PR 30-NOV-1999; 99US-0168060P.
PR 25-JAN-2000; 2000US-0177836P.
PR 27-JAN-2000; 2000US-0178368P.
PR 08-JUN-2000; 2000US-0210292P.
PR 27-JUN-2000; 2000US-00604608.
XX
XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.
XX
XX Lin X, Koelsch G, Tang JN;
XX
XX WPI; 2003-255218/25.
XX
XX New purified recombinant catalytically active memapsin 2 (beta-
PT secretase), useful for designing and screening of specific inhibitors for
PT the diagnosis, prevention and/or treatment of Alzheimer's disease.
XX
XX Disclosure; Fig 1; 44pp; English.
XX
XX The invention relates to a purified recombinant catalytically active
XX memapsin 2, a beta-secretase which produces the beta-amyloid peptide from
XX the beta amyloid precursor protein. Also included are producing the above
XX memapsin 2 (comprising refolding the recombinant memapsin 2 under
XX conditions which dissociate and then slowly refold the enzyme into a
XX catalytically active form), isolating inhibitors of cleavage by memapsin
XX 2 (comprising adding to one or more potential inhibitors the memapsin 2
XX and a substrate for memapsin 2 and screening for decreased cleavage of
XX the substrate by the inhibitors), designing or obtaining inhibitors of
XX the memapsin 2 (comprising modelling an inhibitor based on the
XX crystallisation coordinates of memapsin 2 or the parameters given in the
XX specification), a database comprising binding properties and chemical
XX structures of compounds designed or screened by the method above and
XX treating or preventing Alzheimer's disease (comprising administering to a
XX patient an inhibitor of memapsin 2 which binds to the active site of the
XX memapsin 2 defined by the presence of 2 catalytic aspartic residues and
XX substrate binding cleft or immunising an individual with the above
XX memapsin 2 to elicit an amount of antibodies to reduce the cleavage by
XX endogenous memapsin 2). The memapsin 2 is useful in designing and
XX screening of specific inhibitors for the diagnosis, prevention and/or
XX treatment of Alzheimer's disease. The present sequence represents a
XX memapsin 2 produced by an expression vector and containing vector derived
XX (T7 promoter) amino acids at the N-terminus
XX
XX Sequence 503 AA;
XX
XX Query Match 100.0%; Score 104; DB 1; Length 503;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX QY 22 TQHGIRLPRLRSGAGAPLGL 41
XX |||||||||||||||||||
XX 24 TQHGIRLPRLRSGAGAPLGL 43
XX
XX RESULT 134
XX ADA74818 standard; protein; 503 AA.
XX
XX AC ADA74818;
XX

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DT 20-NOV-2003 (first entry)
XX
XX Plasmid construct protein of human memapsin 2-containing vectors.
XX
XX memapsin 2; beta-secretase; amyloid precursor protein; APP;
XX aspartic proteinase 2; ASP2; neurotrophic; neuroprotective;
XX Alzheimer's disease; human; vector; pET-11amemapsin 2-T1;
XX pET-11amemapsin 2-T2; enzyme.
XX
XX Synthetic.
OS Homo sapiens.
OS Enterobacteria phage T7.
XX
XX Key Location/Qualifiers
FH Region 1..15
FT /note= "Region derived from pET-11a vector"
FT Region 1..13
FT /note= "T7 promoter region"
FT Region 16..456
FT /note= "Promemapsin 2-T1"
FT Region 16..421
FT /note= "Promemapsin 2-T2"
XX
XX US645127-B1.
XX
XX 08-APR-2003.
XX
XX 27-JUN-2000; 2000US-00604608.
XX
XX 28-JUN-1999; 99US-0141363P.
PR 30-NOV-1999; 99US-0168060P.
PR 25-JAN-2000; 2000US-0177836P.
PR 27-JAN-2000; 2000US-0178368P.
PR 08-JUN-2000; 2000US-0210292P.
XX
XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.
XX
XX Tang JN, Lin X, Koelsch G, Hong L;
XX
XX WPI; 2003-566587/53.
XX
XX Novel memapsin 2 protein that cleaves a beta-secretase site of an amyloid
PT precursor protein is useful in the design and screening of specific
PT inhibitors for treating and preventing Alzheimer's disease.
XX
XX Claim 1; Fig 1; 44pp; English.
XX
XX The invention relates to a novel method which comprises the production of
XX purified, catalytically active, recombinant memapsin 2 (beta-secretase)
XX protein where the memapsin protein is expressed in a bacterial cell and
XX cleaves the beta-secretase site of an amyloid precursor protein (APP).
XX Memapsin 2, also known as aspartic proteinase 2 (ASP2), belongs to the
XX aspartic protease family and demonstrates neurotrophic and neuroprotective
XX activities. The protein of the invention may be useful in the design and
XX screening of specific inhibitors which are useful in treating and
XX preventing Alzheimer's disease. The current sequence is that of the
XX plasmid construct protein of the human memapsin 2-containing vectors pET-
XX 11amemapsin 2-T1 and pET-11amemapsin 2-T2 of the invention.
XX
XX Sequence 503 AA;
XX
XX Query Match 100.0%; Score 104; DB 1; Length 503;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX QY 22 TQHGIRLPRLRSGAGAPLGL 41
XX |||||||||||||||||||
XX 24 TQHGIRLPRLRSGAGAPLGL 43
XX
XX RESULT 135
XX AAM52697
XX AAM52697 standard; protein; 509 AA.
XX

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XX AC AAMS2697;
XX XX
XX DT 26-FEB-2002 (first entry)
XX XX
XX DE FLAG-tagged human beta-secretase.
XX XX
XX KW Human; beta-secretase; FLAG tag; inhibitor; amine compound;
XX KW beta amyloid protein production; head injury; spinal injury;
XX KW amyloid precursor protein alpha secretion; nerve damage;
XX KW meningitis sequelae; cerebral paralysis; memory disorder; mental disease;
XX KW nootropic; neuroprotective; cerebroprotective.
XX XX
XX OS Homo sapiens.
XX XX
XX XX Synthetic.
XX XX
XX FH Key
XX FT 502.509
XX FT Region /label=FLAG_tag
XX XX
XX PN WO200187293-A1.
XX XX
XX PD 22-NOV-2001.
XX XX
XX PF 18-MAY-2001; 2001WO-JP004144.
XX XX
XX PR 19-MAY-2000; 2000JP-00152758.
XX XX
XX PA (TAKE ) TAKEDA CHEM IND LTD.
XX XX
XX PI Miyamoto M, Matsui J, Fukumoto H, Tarui N;
XX XX
XX DR WPI; 2002-055640/07.
XX XX
XX DR N-PSDB; ABA02406.
XX XX
XX XX Beta-secretase inhibitor used for treating e.g. Alzheimer's disease and
XX PT injury to brain or spine, and neurodegeneration, comprises amine
XX PT compound.
XX XX
XX PS Example; Page 79-81; 86pp; Japanese.
XX XX
XX CC The invention relates to novel amine compounds which are beta-secretase
XX CC inhibitors. The beta-secretase compounds also have the ability to promote
XX CC amyloid precursor protein alpha secretion and to inhibit beta amyloid
XX CC protein production. The beta-secretase inhibitors of the invention can be
XX CC used for treating head or spinal injuries, nerve damage, sequelae of
XX CC meningitis, cerebral paralysis, memory disorders and mental diseases. The
XX CC present sequence represents a FLAG-tagged human beta-secretase used in
XX CC the exemplifications of the invention
XX XX
XX SQ Sequence 509 AA;
XX XX
XX Query Match 100.0%; Score 104; DB 1; Length 509;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX XX
QY 22 TQHGIRLPRLRSGLGAPLGL 41
XX ||||||||||||||||
XX DB 22 TQHGIRLPRLRSGLGAPLGL 41
XX ||||||||||||||||
XX XX
XX RESULT 136
XX ADJ71858
XX ID ADJ71858 standard; protein; 509 AA.
XX XX
XX AC ADJ71858;
XX XX
XX DT 06-MAY-2004 (first entry)
XX XX
XX DE Human protein SEQ ID NO:7.
XX XX
XX N-Substituted aryl carboxamide; neuroprotective; nootropic; neuroleptic;
XX KW muscular; antiparkinsonian; cerebroprotective; vasotropic; haemostatic;

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XX KW antiarteriosclerotic; antidepressant; neurodegeneration; nerve damage;
XX KW memory disorders; psychiatric disease; myopathy;
XX KW mild cognitive impairment; Alzheimer's disease; human.
XX XX
XX OS Homo sapiens.
XX XX
XX PN WO2004014843-A1.
XX XX
XX PD 19-FEB-2004.
XX XX
XX PF 07-AUG-2003; 2003WO-JP010045.
XX XX
XX PR 09-AUG-2002; 2002JP-00233231.
XX XX
XX PA (TAKE ) TAKEDA CHEM IND LTD.
XX XX
XX PI Uchikawa O, Aso K, Koike T, Tarui N, Hirai K;
XX XX
XX DR WPI; 2004-238691/22.
XX XX
XX DR N-PSDB; ADJ71857.
XX XX
XX PT New/known aryl carboxamide derivatives as inhibitors of aspartic acid
XX PT protease and beta secretase for treating Alzheimer's disease,
XX PT neurodegeneration, nerve damage, memory disorders, psychiatric disease,
XX PT myopathy and cognitive impairment.
XX XX
XX PS Example 1; SEQ ID NO 7; 90pp; Japanese.
XX XX
XX CC The invention relates to novel N-substituted aryl carboxamide compounds
XX CC (I) and their salts. A compound of the invention has neuroprotective,
XX CC neuroleptic, muscular-gen., antiparkinsonian,
XX CC cerebroprotective, vasotropic, haemostatic, antiarteriosclerotic, and
XX CC antidepressant activity. The compounds are used to prevent and treat
XX CC neurodegeneration, nerve damage, memory disorders, psychiatric disease,
XX CC Down's syndrome, senile dementia, Parkinson's disease, Creutzfeldt-Jacob
XX CC disease, amyotrophic lateral sclerosis, or Alzheimer's disease, including
XX CC chorea, multiple sclerosis, cerebrovascular disorders, cerebral embolism,
XX CC cerebral haemorrhage, cerebral arteriosclerosis, head injuries, spinal
XX CC injuries, post-encephalitic disease, cerebral palsy, depression, panic
XX CC disorder and schizophrenia. The present sequence is used in the
XX CC exemplification of the invention.
XX XX
XX SQ Sequence 509 AA;
XX XX
XX Query Match 100.0%; Score 104; DB 1; Length 509;
XX Best Local Similarity 100.0%; Pred. No. 33;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX XX
QY 22 TQHGIRLPRLRSGLGAPLGL 41
XX ||||||||||||||||
XX DB 22 TQHGIRLPRLRSGLGAPLGL 41
XX ||||||||||||||||
XX XX
XX RESULT 137
XX ADP74535
XX ID ADP74535 standard; protein; 509 AA.
XX XX
XX AC ADP74535;
XX XX
XX DT 12-AUG-2004 (first entry)
XX XX
XX DE Human indole compound-related beta-secretase protein.
XX XX
XX KW indole; neuroprotective; nootropic; antiparkinsonian; myopathy;
XX KW neuropathy; memory defect; senile dementia; amnesia; mental illness;
XX KW neurodegenerative disease; Alzheimer's; Creutzfeldt Jacob; CJD;
XX KW amyotrophic lateral sclerosis; Parkinson's; beta-secretase; enzyme;
XX KW human.
XX XX
XX OS Homo sapiens.
XX XX
XX XX JP2004149429-A.

```

XX 27-MAY-2004.  
PD  
XX  
XX 29-OCT-2002; 2002JP-00314580.  
PF  
XX 29-OCT-2002; 2002JP-00314580.  
PR  
XX (TAKE ) TAKEDA CHEM IND LTD.  
PA  
XX WPI; 2004-405630/38.  
XX N-PSDB; ADP74534.  
DR  
XX Novel indole compound useful for treating senile dementia, Alzheimer's  
PT disease, Creutzfeld-Jacob disease, amyotrophic lateral sclerosis,  
PT Parkinson's disease, neuropathy, senile dementia, amnesia or myopathy.  
XX  
XX Example 119; SEQ ID NO 7; 67pp; Japanese.  
PS  
XX The invention relates to a novel indole compound. The compound of the  
CC invention demonstrates neuroprotective, nootropic and antiparkinsonian  
CC activities and may be useful as a preventive or therapeutic agent of  
CC myopathy, neuropathy, defects of memory e.g. senile dementia or amnesia,  
CC mental illness and neurodegenerative disease, including Alzheimer's  
CC disease, Creutzfeld Jacob disease, amyotrophic lateral sclerosis or  
CC Parkinson's disease. The peptide of the invention may be useful for  
CC measuring the beta-secretase inhibitory activity of a test compound. The  
CC current sequence is that of the human indole compound-related beta-  
CC secretase protein of the invention.  
XX  
XX Sequence 509 AA;  
SQ  
XX  
XX Query Match 100.0%; Score 104; DB 1; Length 509;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 22 TQHGIRLPRLRSGLGAPLGL 41  
DB 22 TQHGIRLPRLRSGLGAPLGL 41  
RESULT 138  
ABG09611  
ID ABG09611 standard; protein; 969 AA.  
XX  
XX AC ABG09611;  
XX  
XX DT 13-FEB-2002 (first entry)  
XX  
XX DE Novel human diagnostic protein #9602.  
XX  
XX KW Human; chromosome mapping; gene mapping; gene therapy; forensic;  
KW food supplement; medical imaging; diagnostic; genetic disorder.  
XX  
XX OS Homo sapiens.  
XX  
XX PN WO200175067-A2.  
XX  
XX PD 11-OCT-2001.  
XX  
XX PF 30-MAR-2001; 2001WO-US008631.  
XX  
XX PR 31-MAR-2000; 2000US-00540217.  
XX 23-AUG-2000; 2000US-00649167.  
XX  
XX PA (HYSE-) HYSEQ INC.  
XX  
XX PI Drmanac RT, Liu C, Tang YT;  
XX  
XX WPI; 2001-639362/73.  
XX N-PSDB; AAS73798.  
XX  
XX New isolated polynucleotide and encoded polypeptides, useful in  
PT diagnostics, forensics, gene mapping, identification of mutations

PT responsible for genetic disorders or other traits and to assess  
PT biodiversity.  
XX  
XX PS Claim 20; SEQ ID NO 39970; 103pp; English.  
XX  
XX The invention relates to isolated polynucleotide (I) and polypeptide (II)  
CC sequences. (I) is useful as hybridisation probes, polymerase chain  
CC reaction (PCR) primers, oligomers, and for chromosome and gene mapping,  
CC and in recombinant production of (II). The polynucleotides are also used  
CC in diagnostics as expressed sequence tags for identifying expressed  
CC genes. (II) is useful in gene therapy techniques to restore normal  
CC activity of (II) or to treat disease states involving (II). (II) is  
CC useful for generating antibodies against it, detecting or quantitating a  
CC polypeptide in tissue, as molecular weight markers and as a food  
CC supplement. (II) and its binding partners are useful in medical imaging  
CC of sites expressing (II). (I) and (II) are useful for treating disorders  
CC involving aberrant protein expression or biological activity. The  
CC polypeptide and polynucleotide sequences have applications in  
CC diagnostics, forensics, gene mapping, identification of mutations  
CC responsible for genetic disorders or other traits to assess biodiversity  
CC and to produce other types of data and products dependent on DNA and  
CC amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic  
CC patent did not appear in the printed specification, but was obtained in  
CC electronic format directly from WIPO at  
CC ftp.wipo.int/pub/published\_pct\_sequences  
XX  
XX Sequence 969 AA;  
SQ  
XX  
XX Query Match 100.0%; Score 104; DB 1; Length 969;  
Best Local Similarity 100.0%; Pred. No. 33;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 22 TQHGIRLPRLRSGLGAPLGL 41  
DB 22 TQHGIRLPRLRSGLGAPLGL 41  
RESULT 139  
AAE06909  
ID AAE06909 standard; protein; 476 AA.  
XX  
XX AC AAE06909;  
XX  
XX DT 23-OCT-2001 (first entry)  
XX  
XX DE Murine aspartyl protease 2b (murine Asp2b) protein.  
XX  
XX KW Mouse; aspartyl protease 2b; Asp 2b; beta-amyloid precursor protein; APP;  
KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;  
KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;  
XX neuroprotective; antisense therapy; gene therapy.  
XX  
XX OS Mus musculus.  
XX  
XX PN WO200150829-A2.  
XX  
XX PD 19-JUL-2001.  
XX  
XX PF 09-MAY-2001; 2001WO-IB000799.  
XX  
XX PR 09-MAY-2001; 2001WO-IB000799.  
XX  
XX PA (BIEN/) BIENKOWSKI M J.  
XX (GURN/) GURNEY M E.  
XX (HEIN/) HEINIKSON R L.  
XX (PARO/) PARODI L A.  
XX (YANR/) YAN R.  
XX  
XX BIENKOWSKI MJ, Gurney ME, Heinikson RL, Parodi LA, Yan R;  
PI WPI; 2001-483072/52.  
XX

PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
XX activity.  
XX  
PS Claim 24; Page; 185pp; English.  
XX  
XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid  
CC precursor protein (APP) isoforms and their corresponding DNA molecules.  
CC Human aspartyl proteases can act as beta-secretase proteases useful for  
CC treating Alzheimer's disease. APP isoforms are useful for identifying  
CC modulators of amyloid-beta peptide production, for use in designing  
CC therapeutics for the treatment and prevention of Alzheimer's disease,  
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis  
CC and neuronal loss. APP isoforms are also used in methods for identifying  
CC inhibitors and modulators of human Asp2 activity. The invention relates  
CC to a method for identifying agents that modulate the activity of human  
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
CC as a means to screen in cellular assays for the inhibitors of beta- and  
CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in  
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.  
CC The present sequence is murine aspartyl protease 2 (murine Asp2), a  
CC 'short' form designated as (murine Asp2b) related to the invention  
SQ  
SQ Sequence 476 AA;  
Query Match 74.0%; Score 77; DB 1; Length 476;  
Best Local Similarity 80.0%; Pred. No. 87;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;  
QY 22 THGIRLPURSGIAGPLGL 41  
Db 22 THGIRLPURSGIAGPLGL 41  
RESULT 140  
AAE02619  
ID AAE02619 standard; protein; 476 AA.  
AC AAE02619;  
XX  
XX  
DT 10-AUG-2001 (first entry)  
XX  
XX Murine aspartyl protease 2b (asp 2b).  
DE  
XX  
XX Murine; alpha-secretase; amyloid precursor protein; APP; therapy;  
KW Alzheimer's disease; antialzheimer's; aspartyl protease 2b; Asp 2b;  
XX beta-secretase.  
XX  
XX Mus sp.  
OS  
XX  
XX WO200123533-A2.  
PN  
XX  
XX 05-APR-2001.  
PD  
XX  
XX 22-SEP-2000; 2000WO-US026080.  
PF  
XX  
XX 23-SEP-1999; 99US-0155493P.  
PR 23-SEP-1999; 99WO-US020881.  
PR 13-OCT-1999; 99US-00416901.  
PR 06-DEC-1999; 99US-0169232P.  
XX  
XX  
XX (PHAA ) PHARMACIA & UPJOHN CO.  
PA  
XX  
XX Gurney M, Bienkowski MJ;  
PI  
XX  
XX WPI; 2001-290516/30.  
DR  
XX  
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor  
PT protein, useful for the treatment of Alzheimer's disease.  
PT  
XX  
XX Example 3; Page; 189pp; English.

XX  
XX The present invention relates to enzymes for cleaving the alpha-  
CC secretase site of the amyloid precursor protein (APP) and methods of  
CC identifying those enzymes. The methods may be used to identify enzymes  
CC that may be used to cleave the alpha-secretase cleavage site of the APP  
CC protein. The enzymes may be used to treat or modulate the progress of  
CC Alzheimer's disease. The present sequence is murine aspartyl protease 2b  
CC (Asp 2b). Asp 2b has beta-secretase protease activity. Note: The present  
CC sequence is not found in the specification but is derived from murine Asp  
CC 2a referred as SEQ ID NO: 8 (AAE02583) and shown in Figure 4 of the  
CC specification  
XX  
SQ  
SQ Sequence 476 AA;  
Query Match 74.0%; Score 77; DB 1; Length 476;  
Best Local Similarity 80.0%; Pred. No. 87;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;  
QY 22 THGIRLPURSGIAGPLGL 41  
Db 22 THGIRLPURSGIAGPLGL 41  
RESULT 141  
ADO50480  
ID ADO50480 standard; protein; 476 AA.  
XX  
XX  
AC ADO50480;  
XX  
XX  
DT 29-JUL-2004 (first entry)  
XX  
XX  
DE Murine aspartyl protease (asp)-2(b).  
XX  
XX  
KW Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;  
KW Alzheimer's disease; gene therapy; murine; enzyme.  
XX  
XX  
XX Mus musculus.  
OS  
XX  
XX US6737510-B1.  
PN  
XX  
XX 18-MAY-2004.  
PD  
XX  
XX 12-APR-2000; 2000US-00548373.  
PF  
XX  
XX 24-SEP-1998; 98US-0101594P.  
PR 23-SEP-1999; 99US-00404133.  
PR 23-SEP-1999; 99US-0155493P.  
PR 13-OCT-1999; 99WO-US020881.  
PR 13-OCT-1999; 99US-00416901.  
XX  
XX  
XX (PHAA ) PHARMACIA & UPJOHN CO.  
PA  
XX  
XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
PI  
XX  
XX WPI; 2004-387112/36.  
DR  
XX  
XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG  
PT involved in processing amyloid precursor protein into amyloid beta,  
PT useful in preparing a composition for treating or preventing Alzheimer's  
PT disease.  
XX  
XX  
XX Example 3; SEQ ID NO 73; 108pp; English.  
PS  
XX  
XX The invention relates to a method for identifying an agent that decreases  
CC the protease activity of the aspartyl protease (Asp) polypeptide. It also  
CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
CC cleavage site of the amyloid precursor protein (APP). The invention is  
CC useful in preparing a composition for treating or preventing Alzheimer's  
CC disease. It is also useful in gene therapy. The present sequence is  
CC murine Asp-2 protein. This sequence is used to illustrate the method of  
CC the invention.  
SQ  
SQ Sequence 476 AA;

Query Match 74.0%; Score 77; DB 1; Length 476;  
 Best Local Similarity 80.0%; Pred. No. 87;  
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 22 THGIRLPRLRSGLAGPPLGL 41  
 Db 22 THGIRLPRLRSGLAGPPLGL 41

RESULT 142  
 ID ABJ25301 standard; protein; 489 AA.

ABJ25301;  
 10-APR-2003 (first entry)

Mouse BACE-interacting protein SEQ ID No 41.  
 Neurotropic; neuroprotective; beta-secretase; BACE-interacting; BACE;  
 transmembrane; cytoplasmic region; Alzheimer's disease; gene therapy;  
 transgenic animal; mouse; murine; enzyme.

Unidentified.  
 WO2002101232-A2.  
 19-DEC-2002.  
 07-JUN-2002; 2002WO-EP06667.  
 12-JUN-2001; 2001EP-00202228.

(VLA-) VLAAMS INTERUNIVERSITAIR INST BIOTECHNOG.

Marjaux E, Dominguez-Tinland DI, Annaert W, De Strooper B;  
 WPI; 2003-156973/15.

New beta-secretase (BACE)-interacting polypeptide and nucleic acid,  
 useful for screening, diagnosing and manufacturing a medicament for  
 treating Alzheimer's disease, and in producing cell lines and transgenic  
 animals.

Example; Page 86-88; 90pp; English.

The invention relates to a beta-secretase (BACE)-interacting polypeptide  
 comprising a BACE interacting domain capable of interacting with the  
 transmembrane and cytoplasmic region of BACE. The BACE-interacting  
 protein and the nucleic acid encoding the protein are useful as a  
 medicament, or for manufacturing a medicament, for treating Alzheimer's  
 disease. The protein and the nucleic acid may also be used in screening  
 and diagnosing Alzheimer's disease, and in producing cell lines and  
 transgenic animals useful as models for the above mentioned disease. The  
 polynucleotide sequences of the invention may also be used in gene  
 therapy. This sequence represents a BACE-interacting protein of the  
 invention

Sequence 489 AA;

Query Match 74.0%; Score 77; DB 1; Length 489;  
 Best Local Similarity 80.0%; Pred. No. 87;  
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 22 THGIRLPRLRSGLAGPPLGL 41  
 Db 22 THGIRLPRLRSGLAGPPLGL 41

RESULT 143  
 ID AAY8427 standard; protein; 501 AA.

XX AAY8427;

AC 03-AUG-2000 (first entry)

DT Murine aspartyl protease 2 (a) (Asp2) amino acid sequence.

XX Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;  
 KM Alzheimer's disease; beta secretase site; mouse.

XX Mus musculus.

PN WO200017369-A2.

PD 30-MAR-2000.

PF 23-SEP-1999; 99WO-US020881.

PR 24-SEP-1998; 98US-0101594P.

PA (PHAA ) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

DR WPI; 2000-303209/26.

DR N-PSDB; AAA15664.

New enzyme designated human aspartase useful in research into Alzheimer's  
 Disease is capable of cleaving amyloid protein precursor at the beta  
 secretase site to produce amyloid beta peptide.

PS Claim 105; Fig 4; 183pp; English.

This sequence represents the murine aspartyl protease 2 (Asp2) amino acid  
 sequence. The invention relates to a protease (e.g. Asp2) capable of  
 cleaving the beta secretase site of amyloid precursor protein (APP). The  
 protease contains a sequence encoding the amino acid sequence DTG and a  
 sequence encoding DSG or DTG separated by 100-300 amino acids. When  
 mutated the APP gene causes an autosomal dominant form of Alzheimer's  
 disease. APP localises to the cell surface membrane and have a single C-  
 terminal transmembrane domain. Proteolytic processing of APP produces the  
 amyloid beta protein, which is possibly very important in Alzheimer's  
 disease. The invention includes a nucleotide sequence encoding the  
 protease, a vector containing the nucleotide sequence, and a cell line  
 comprising the vector. Methods for screening for inhibitors of beta  
 secretase activity are also given in the invention. The human aspartase  
 protein and nucleotide sequences and the methods for identifying  
 inhibitors of the protease, are useful in the treatment of and research  
 in to Alzheimer's disease

Sequence 501 AA;

Query Match 74.0%; Score 77; DB 1; Length 501;  
 Best Local Similarity 80.0%; Pred. No. 87;  
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 22 THGIRLPRLRSGLAGPPLGL 41  
 Db 22 THGIRLPRLRSGLAGPPLGL 41

RESULT 144

AY94768 standard; protein; 501 AA.

AY94768;

DT 12-FEB-2001 (first entry)

DE Murine beta-secretase amino acid sequence.

KM Beta-secretase; enzyme; amyloid plaque; Alzheimer's disease; mouse;  
 Down's syndrome; amyloid angiopathy; gene therapy; neuroprotective.



XX OS Mus sp.  
XX PN WO200058479-A1.  
XX FD 05-OCT-2000.  
XX PF 23-MAR-2000; 2000WO-US007755.  
XX PR 26-MAR-1999; 99US-00277229.  
XX PA (AMGE-) AMGEN INC.  
XX PI Citron M, Vassar RJ, Bennett BD;  
XX DR WPI; 2000-594643/56.  
XX DR N-PSDB; AAA28279.  
XX PT Isolated beta-secretase nucleic acids and encoded polypeptides, useful  
XX for diagnosis and gene therapy of Alzheimer's disease.  
XX PS Claim 1; Fig 5; 145pp; English.  
XX CC This invention relates to 3 nucleotide sequences encoding beta-secretase  
XX proteins. Beta-secretase is an enzyme involved in the production of one  
XX of the components of amyloid plaques involved in Alzheimer's disease. The  
XX invention includes an expression vector comprising the nucleotide  
XX sequence, a host cell comprising the expression vector, and a process for  
XX producing the protein through culturing the transformed cells. Also  
XX included in the invention are a polypeptide derivative of the beta-  
XX secretase protein, a fusion protein comprising beta-secretase fused to a  
XX heterologous amino acid sequence, and a method for modulating the levels  
XX of beta-secretase polypeptide in a mammal comprising administering the  
XX polynucleotide sequence. Beta-secretase exhibits neuroprotective and  
XX neurotropic activity. The beta-secretase nucleotide sequence may be used to  
XX map locations of the beta-secretase gene and related genes on chromosomes  
XX and as hybridization probes in diagnostic assays to test for the presence  
XX of beta-secretase DNA or RNA, such as in Alzheimer's disease, Down's  
XX syndrome, and amyloid angiopathy. The nucleotide sequence may also be  
XX used as anti-sense inhibitors of beta-secretase expression, in gene  
XX therapy of Alzheimer's disease, and for the identification of compounds  
XX that modulate beta-secretase activity. Antibodies to the beta-secretase  
XX protein may be used for in vitro and in vivo diagnostic purposes to  
XX detect the presence of beta-secretase polypeptide in a body fluid or cell  
XX sample. The present sequence represents the murine beta-secretase protein  
XX  
XX Sequence 501 AA;  
SQ  
Query Match 74.0%; Score 77; DB 1; Length 501;  
Best Local Similarity 80.0%; Pred. No. 87;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLRSGLCGAPLGL 41  
DB 22 THLGIRLPRLRSGLCGAPLGL 41  
RESULT 145  
AAU07204  
ID AAU07204 standard; protein; 501 AA.  
XX AC AAU94769;  
XX DT 12-FEB-2001 (first entry)  
XX DE Rat beta-secretase protein.  
XX KW Beta-secretase; enzyme; amyloid plaque; Alzheimer's disease; rat;  
XX Down's syndrome; amyloid angiopathy; gene therapy; neuroprotective; ss.  
XX OS Rattus sp.  
XX PN WO200058479-A1.

XX PD 05-OCT-2000.  
XX PF 23-MAR-2000; 2000WO-US007755.  
XX PR 26-MAR-1999; 99US-00277229.  
XX PA (AMGE-) AMGEN INC.  
XX PI Citron M, Vassar RJ, Bennett BD;  
XX DR WPI; 2000-594643/56.  
XX DR N-PSDB; AAA28280.  
XX PT Isolated beta-secretase nucleic acids and encoded polypeptides, useful  
XX for diagnosis and gene therapy of Alzheimer's disease.  
XX PS Claim 1; Fig 6; 145pp; English.  
XX CC This invention relates to 3 nucleotide sequences encoding beta-secretase  
XX proteins. Beta-secretase is an enzyme involved in the production of one  
XX of the components of amyloid plaques involved in Alzheimer's disease. The  
XX invention includes an expression vector comprising the nucleotide  
XX sequence, a host cell comprising the expression vector, and a process for  
XX producing the protein through culturing the transformed cells. Also  
XX included in the invention are a polypeptide derivative of the beta-  
XX secretase protein, a fusion protein comprising beta-secretase fused to a  
XX heterologous amino acid sequence, and a method for modulating the levels  
XX of beta-secretase polypeptide in a mammal comprising administering the  
XX polynucleotide sequence. Beta-secretase exhibits neuroprotective and  
XX neurotropic activity. The beta-secretase nucleotide sequence may be used to  
XX map locations of the beta-secretase gene and related genes on chromosomes  
XX and as hybridization probes in diagnostic assays to test for the presence  
XX of beta-secretase DNA or RNA, such as in Alzheimer's disease, Down's  
XX syndrome, and amyloid angiopathy. The nucleotide sequence may also be  
XX used as anti-sense inhibitors of beta-secretase expression, in gene  
XX therapy of Alzheimer's disease, and for the identification of compounds  
XX that modulate beta-secretase activity. Antibodies to the beta-secretase  
XX protein may be used for in vitro and in vivo diagnostic purposes to  
XX detect the presence of beta-secretase polypeptide in a body fluid or cell  
XX sample. The present sequence represents the rat beta-secretase protein  
XX  
XX Sequence 501 AA;  
SQ  
Query Match 74.0%; Score 77; DB 1; Length 501;  
Best Local Similarity 80.0%; Pred. No. 87;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLRSGLCGAPLGL 41  
DB 22 THLGIRLPRLRSGLCGAPLGL 41  
RESULT 146  
AAU07204  
ID AAU07204 standard; protein; 501 AA.  
XX AC AAU07204;  
XX DT 09-SEP-2004 (revised)  
XX DT 24-OCT-2001 (first entry)  
XX DE Mouse aspartyl protease 2a (Asp-2a).  
XX KW Mouse; aspartyl protease 1; Asp-1; neurotropic; neuroprotective;  
XX aspartyl protease 2; Asp2; amyloid protein precursor; APP;  
XX beta-secretase; Alzheimer's disease.  
XX OS Mus sp.  
XX OS unidentified.  
XX FH Key  
XX FT Peptide 1.21  
Location/Qualifiers

PT1 /note= "Signal peptide"  
 FT Misc-difference 22..45  
 FT /note= "Pre-propeptide"  
 FT Misc-difference 46..57  
 FT /note= "Propeptide"  
 FT 58..501  
 FT /note= "Mature Aspartyl protease-2a"  
 FT Region 420..454  
 FT /note= "Alpha helical spacer region"  
 FT Domain 455..477  
 FT /note= "Transmembrane domain"  
 FT Domain 478..501  
 FT /note= "Cytoplasmic domain"  
 XX W0200149097-A2.  
 XX 12-JUL-2001.  
 XX 09-MAY-2001; 2001WO-1B000797.  
 XX 09-MAY-2001; 2001WO-1B000797.  
 XX 09-MAY-2001; 2001WO-1B000797.  
 XX (BIEN/) BIENKOWSKI M J.  
 XX (GURN/) GURNEY M E.  
 XX (HEIN/) HEINRIKSON R L.  
 XX (PARO/) PARODI L A.  
 XX (YANR/) YAN R.  
 XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 XX WPI: 2001-502548/55.  
 XX N-PSDB; AAS11704.  
 DR Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.  
 XX Claim 24; Fig 4; 185pp; English.  
 XX The invention relates to a novel purified polypeptide comprising a  
 CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. Also included is an isoform of amyloid protein precursor (APP)  
 CC comprising the amino acid sequence of a APP or its fragment containing an  
 CC APP cleavage site recognizable by a mammalian beta-secretase, and further  
 CC comprising two lysine residues at the carboxyl terminus of the amino acid  
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used  
 CC for assaying for modulators of beta-secretase activity; identifying  
 CC agents that inhibit the APP processing activity of human Asp2 aspartyl  
 CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2  
 CC and for reducing cellular production of amyloid beta (Abeta) from APP.  
 CC Agents identified by the above methods are useful for treating  
 CC Alzheimer's disease; and for identifying modulators of amyloid-beta  
 CC (Abeta) peptide production, for use in designing therapeutics for the  
 CC treatment or prevention of Alzheimer's disease. Probes and primers  
 CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp  
 CC nucleic acids in in vitro assays and in Northern and Southern blots. The  
 CC present sequence represents the amino acid sequence of mouse Asp-2a used  
 CC in the methods of the invention  
 CC  
 CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key  
 XX  
 XX Sequence 501 AA;  
 SQ  
 Query Match 74.0%; Score 77; DB 1; Length 501;  
 Best Local Similarity 80.0%; Pred. No. 87;  
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;  
 Oy 22 THGIRLPRLRSGLAGAPLGL 41  
 Db 22 THGIRLPRLRSGLAGAPLGL 41

RESULT.147  
 AAE10631  
 ID AAE10631 standard; protein; 501 AA.  
 AC AAE10631;  
 XX 10-DEC-2001 (first entry)  
 DT  
 XX Murine aspartyl protease 2(a) [Asp2(a)] protein.  
 DE  
 XX Murine; aspartyl protease 2(a); Asp2(a); amyloid precursor protein; APP;  
 KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;  
 KW amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective.  
 XX  
 XX Mus musculus.  
 OS  
 XX GB2357767-A.  
 XX 04-JUL-2001.  
 XX 22-SEP-2000; 2000GB-00023315.  
 XX 23-SEP-1999; 99US-00404133.  
 XX 23-SEP-1999; 99US-0155483P.  
 XX 23-SEP-1999; 99WO-US020881.  
 XX 13-OCT-1999; 99US-00416901.  
 XX 06-DEC-1999; 99US-0169232P.  
 XX (PHAA ) PHARMACIA & UPJOHN CO.  
 PA Bienkowski MJ, Gurney M;  
 XX WPI: 2001-444208/48.  
 XX N-PSDB; AAD17867.  
 DR Polypeptide comprising fragments of human aspartyl protease with amyloid  
 PT precursor protein processing activity and alpha-secretase activity, for  
 PT identifying modulators useful in treating Alzheimer's disease.  
 XX Example 3; Fig 4; 187pp; English.  
 XX The patent discloses human aspartyl protease 1 (Hu-Asp1) or modified Asp1  
 CC proteins which lack transmembrane domain or amino terminal domain or  
 CC cytoplasmic domain and retains alpha-secretase activity and amyloid  
 CC protein precursor (APP) processing activity. The proteins of the  
 CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which  
 CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase  
 CC activity, where modulators that increase hu-Asp1 alpha-secretase activity  
 CC are useful for treating Alzheimer's disease (AD) which causes progressive  
 CC dementia with consequent formation of amyloid plaques, neurofibrillary  
 CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful  
 CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein  
 CC with the substrate under acidic conditions and determining the level of  
 CC hu-Asp1 proteolytic activity. The present sequence is Asp2(a) protein  
 CC from murine  
 XX  
 XX Sequence 501 AA;  
 SQ  
 Query Match 74.0%; Score 77; DB 1; Length 501;  
 Best Local Similarity 80.0%; Pred. No. 87;  
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;  
 Oy 22 THGIRLPRLRSGLAGAPLGL 41  
 Db 22 THGIRLPRLRSGLAGAPLGL 41  
 RESULT 148  
 AAE06861  
 ID AAE06861 standard; protein; 501 AA.

AC AAE06861;  
XX  
DT 23-OCT-2001 (first entry)  
XX  
DE Murine aspartyl protease 2a (murine Asp2a) protein.  
XX  
KW Mouse; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;  
KM beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;  
KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;  
XX neuroprotective; antisense therapy; gene therapy.  
OS Mus musculus.  
XX  
XX WO200150829-A2.  
XX  
PD 19-JUL-2001.  
XX  
PF 09-MAY-2001; 2001WO-IB000799.  
XX  
PR 09-MAY-2001; 2001WO-IB000799.  
XX  
PA (BIEN/) BIENKOWSKI M J.  
PA (GURN/) GURNEY M E.  
PA (HEIN/) HEINRIKSON R L.  
PA (PARO/) PARODI L A.  
PA (YANR/) YAN R.  
XX  
PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
XX  
DR WPI; 2001-483072/52.  
DR N-PSDB; AAD13023.  
XX  
PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
PT activity.  
XX  
XX Claim 24; Fig 4; 185pp; English.  
XX  
PS The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid  
CC precursor protein (APP) isoforms and their corresponding DNA molecules.  
CC Human aspartyl proteases can act as beta-secretase proteases useful for  
CC treating Alzheimer's disease. APP isoforms are useful for identifying  
CC modulators of amyloid-beta peptide production, for use in designing  
CC therapeutics for the treatment and prevention of Alzheimer's disease,  
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis  
CC and neuronal loss. APP isoforms are also used in methods for identifying  
CC inhibitors and modulators of human Asp2 activity. The invention relates  
CC to a method for identifying agents that modulate the activity of human  
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
CC as a means to screen in cellular assays for the inhibitors of beta- and  
CC gamma- secretase. Hu-APP DNA fragments are useful as probes or primers in  
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.  
CC The present sequence is murine aspartyl protease 2 (murine Asp2), a  
CC "long" form designated as (murine Asp2a) related to the invention  
XX  
SQ Sequence 501 AA;  
Query Match 74.0%; Score 77; DB 1; Length 501;  
Best Local Similarity 80.0%; Pred. No. 87;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLNSGAGAPLGL 41  
DB 22 THLGIRLPRLNSGAGAPLGL 41  
RESULT 149  
AAE02583  
ID AAE02583 standard; protein; 501 AA.  
XX  
XX AAE02583;  
AC

XX  
DT 10-AUG-2001 (first entry)  
XX  
DE Murine aspartyl protease 2a (Asp 2a).  
XX  
KW Murine; alpha-secretase; amyloid precursor protein; APP; therapy;  
KM Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp 2a;  
XX beta-secretase.  
XX  
OS Mus sp.  
XX  
XX WO200123533-A2.  
XX  
PD 05-APR-2001.  
XX  
PF 22-SEP-2000; 2000WO-US026080.  
XX  
PR 23-SEP-1999; 99US-0155493P.  
PR 23-SEP-1999; 99WO-US020881.  
PR 13-OCT-1999; 99US-00416901.  
PR 06-DEC-1999; 99US-0169232P.  
XX  
PA (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
PI Gurney M, Bienkowski MJ;  
XX  
DR WPI; 2001-290516/30.  
DR N-PSDB; AAD06741.  
XX  
PT Enzymes that cleave the alpha-secretase site of the amyloid precursor  
PT protein, useful for the treatment of Alzheimer's disease.  
XX  
PS Example 3; Fig 4; 189pp; English.  
XX  
CC The present invention relates to enzymes for cleaving the alpha-  
CC secretase site of the amyloid precursor protein (APP) and methods of  
CC identifying those enzymes. The methods may be used to identify enzymes  
CC that may be used to cleave the alpha-secretase cleavage site of the APP  
CC protein. The enzymes may be used to treat or modulate the progress of  
CC Alzheimer's disease. The present sequence is murine aspartyl protease 2a  
CC (Asp 2a). Asp 2a has beta-secretase protease activity  
XX  
SQ Sequence 501 AA;  
Query Match 74.0%; Score 77; DB 1; Length 501;  
Best Local Similarity 80.0%; Pred. No. 87;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLNSGAGAPLGL 41  
DB 22 THLGIRLPRLNSGAGAPLGL 41  
RESULT 150  
ID AAB84948 standard; protein; 501 AA.  
XX  
AC AAB84948;  
XX  
DT 06-AUG-2001 (first entry)  
XX  
DE Mouse aspartic secretase-2 (MASP-2).  
XX  
KW Aspartic secretase-2; MASP-2; Alzheimer's disease; cancer; nootropic;  
KM neuroprotective; cytostatic.  
XX  
OS Mus musculus.  
XX  
XX WO200136600-A1.  
XX  
PN 25-MAY-2001.  
PD  
XX  
PF 16-NOV-2000; 2000WO-US031583.

XX 16-NOV-1999; 99US-0155800P.  
 PR 15-NOV-2000; 2000US-00713158.  
 XX (SMIK ) SMITHKLINE BEECHAM CORP.  
 PA (SMIK ) SMITHKLINE BEECHAM PLC.  
 XX  
 PI Zhu Y, Li X, Powell DJ, Christie G;  
 XX WPI; 2001-343813/36.  
 DR N-PSDB; AAF83845.  
 XX  
 PT New mouse aspartic secretase-2 polypeptide, useful for screening drugs  
 PT for the prevention and treatment of Alzheimer's disease and cancer.  
 XX  
 PS Claim 2; Page 23; 31pp; English.  
 XX  
 CC This represents a mouse aspartic secretase-2 (mASP-2) polypeptide. The  
 CC mASP-2 polypeptide can be expressed by standard recombinant methodology.  
 CC mASP-2 can be used to discover drugs for the prevention and treatment of  
 CC diseases including Alzheimer's, cancer, and prohormone processing  
 CC dysfunctions, particular where knockout mice are used  
 XX  
 SQ Sequence 501 AA;  
 Query Match 74.0%; Score 77; DB 1; Length 501;  
 Best Local Similarity 80.0%; Pred. No. 87;  
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;  
 Oy 22 TQHGIRLPRLRSGLGAPPLGL 41  
 Db 22 THLGIRLPRLRSGLGAPPLGL 41  
 RESULT 151  
 AAU06605  
 ID AAU06605 standard; protein; 501 AA.  
 XX  
 AC AAU06605;  
 XX  
 DT 24-OCT-2001 (first entry)  
 XX  
 DE Mouse Aspartyl protease 2(a), Asp2(a).  
 XX  
 KM Mouse; Aspartyl protease; Asp2(a); beta-secretase; nootropic;  
 KM neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;  
 KM amyloid-beta; Abeta.  
 XX  
 OS Mus musculus.  
 XX  
 PN W0200149098-A2.  
 XX  
 PD 12-JUL-2001.  
 XX  
 PF 09-MAY-2001; 2001WO-IB000798.  
 XX  
 PR 09-MAY-2001; 2001WO-IB000798.  
 XX  
 PA (BIEN/) BIENKOWSKI M J.  
 PA (GURN/) GURNEY M E.  
 PA (HEIN/) HEINRIKSON R L.  
 PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.  
 XX  
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 XX WPI; 2001-502549/55.  
 DR N-PSDB; AAS11519.  
 XX  
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.

XX Claim 24; Fig 4; 185pp; English.  
 XX  
 CC The invention relates to a purified polypeptide comprising a fragment of  
 CC mammalian aspartyl protease (Asp2) protein which lacks the Asp2  
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and  
 CC the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. The invention also details polynucleotides for the Asp proteins  
 CC and vectors expressing them, and a polypeptide (isoform of amyloid  
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or  
 CC its fragment containing an APP cleavage site recognizable by a mammalian  
 CC beta-secretase, and further comprising two lysine residues at the  
 CC carboxyl termini of the amino acid sequence of the mammalian APP or APP  
 CC fragment. Also included in the invention are methods of identifying  
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
 CC useful for treating Alzheimer's disease. APP is useful in methods for  
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-  
 CC beta (Abeta) peptide production. APP is also useful in designing  
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP  
 CC comprising the APP-Sw-beta-secretase peptide sequence (NIDA), which is  
 CC associated with increased levels of Abeta processing is useful in assays  
 CC relating the Alzheimer's research. The expression vector is useful for  
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp  
 CC oligonucleotides are useful as probes or primers. The probes are useful  
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and  
 CC Southern blots. The present sequence is mouse Asp2(a)  
 XX  
 SQ Sequence 501 AA;  
 Query Match 74.0%; Score 77; DB 1; Length 501;  
 Best Local Similarity 80.0%; Pred. No. 87;  
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;  
 Oy 22 TQHGIRLPRLRSGLGAPPLGL 41  
 Db 22 THLGIRLPRLRSGLGAPPLGL 41  
 RESULT 152  
 ABB78592  
 ID ABB78592 standard; protein; 501 AA.  
 XX  
 AC ABB78592;  
 XX  
 DT 16-JUL-2002 (first entry)  
 XX  
 DE Mouse Asp-2(a) protein sequence SEQ ID NO:8.  
 XX  
 KM Mouse; Asp-1; Asp-2; aspartyl protease; enzyme; Alzheimer's disease;  
 KM proteolytic.  
 XX  
 OS Mus musculus.  
 XX  
 PN GB2367060-A.  
 XX  
 PD 27-MAR-2002.  
 XX  
 PF 29-OCT-2001; 2001GB-00025934.  
 XX  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99WO-US020081.  
 PR 13-OCT-1999; 99US-00416901.  
 PR 06-DEC-1999; 99US-0169232P.  
 PR 22-SEP-2000; 2000GB-00023315.  
 XX  
 PA (PHAA ) PHARMACIA & UPJOHN CO.  
 XX  
 PI Bienkowski MJ, Gurney M;  
 XX WPI; 2002-397167/43.  
 DR N-PSDB; ABL52459.  
 XX

PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.

PS Example 3; Fig 4; 182pp; English.

CC The present invention describes a human aspartyl protease 1 (hu-Asp1)  
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,  
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1  
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a  
 CC nucleotide sequence that hybridises under stringent conditions to the non  
 CC coding strand complementary to a defined 1804 nucleotide sequence (see  
 CC AB152456) where the nucleotide sequence encodes a polypeptide having Asp1  
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that  
 CC hybridises under stringent conditions to (III) (the nucleotide sequence  
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding  
 CC to amino acids 23-62 of hu-Asp1 (see AB878589)); (4) a vector (IV)  
 CC comprising (III) or (III'); and (5) a host cell (V) transformed or  
 CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease  
 CC substrate (I) may be used as an enzyme substrate in assays to detect  
 CC aspartyl protease activity, (II) and therefore diagnose diseases  
 CC associated with aberrant hu-Asp1 expression and activity such as  
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
 CC sequence represents mouse Asp-2(a) from the present invention

SO Sequence 501 AA;

Query Match 74.0%; Score 77; DB 1; Length 501;  
 Best Local Similarity 80.0%; Pred. No. 87;  
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

OY 22 TOHGIRLPFRSGLGAPPLGL 41

DB 22 THLGIRLPFRSGLGAPPLGL 41

RESULT 153  
 ADJ94320  
 ID ADJ94320 standard; protein; 501 AA.

AC ADJ94320;

DT 03-JUN-2004 (first entry)

DB Mouse aspartyl protease 2b, Asp-2b.

XX Mouse; enzyme; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);  
 KW beta secretase; amyloid protein precursor; APP; Alzheimer's disease;  
 KW neurotropic; neuroprotective; amyloid beta.

OS Mus musculus.

PN US6706485-B1.

PD 16-MAR-2004.

PF 12-APR-2000; 2000US-00548376.

PR 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99MO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

PA Guirney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
 PI WPI; 2004-236722/22.

DR N-PSDB; ADJ94319.

XX Identifying agents that modulate activity of Asp2 aspartyl protease  
 PT useful for treating or preventing Alzheimer's disease involves comparing  
 PT APP processing activity of protease in presence and absence of test  
 PT agent.

PS Example 3; SEQ ID NO 8; 109pp; English.

CC The invention relates to identifying agents that modulate activity of  
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 CC precursor protein (APP) in the presence and absence of a test agent;  
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(b), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated  
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy terminus amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW  
 CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the APP proteins. The  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease, preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence represents an aspartyl protease  
 CC of the invention.

SO Sequence 501 AA;

Query Match 74.0%; Score 77; DB 1; Length 501;  
 Best Local Similarity 80.0%; Pred. No. 87;  
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

OY 22 TOHGIRLPFRSGLGAPPLGL 41

DB 22 THLGIRLPFRSGLGAPPLGL 41

RESULT 154  
 ADJ050416  
 ID ADJ050416 standard; protein; 501 AA.

AC ADJ050416;

DT 29-JUL-2004 (first entry)

DB Murine aspartyl protease (Asp)-2.

XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;  
 KW Alzheimer's disease; gene therapy; murine; enzyme.

OS Mus musculus.

PN US6737510-B1.

PD 18-MAY-2004.

PF 12-APR-2000; 2000US-00548373.

PR 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99MO-US020881.

```
PR 13-OCT-1999; 99US-00416901.
XX
PA (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
XX
DR WPI; 2004-387112/36.
XX
N-PSDB; AD050415.
XX
PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
PT involved in processing amyloid precursor protein into amyloid beta,
PT useful in preparing a composition for treating or preventing Alzheimer's
PT disease.
XX
PS Example 3; SEQ ID NO 8; 108bp; English.
XX
CC The invention relates to a method for identifying an agent that decreases
CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
CC provides enzyme and enzymatic procedures for cleaving the beta secretase
CC cleavage site of the amyloid precursor protein (APP). The invention is
CC useful in preparing a composition for treating or preventing Alzheimer's
CC disease. It is also useful in gene therapy. The present sequence is
CC murine Asp-2 protein. This sequence is used to illustrate the method of
CC the invention.
XX
SQ Sequence 501 AA;
XX
Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 87;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
OY 22 TQHGIRLPNRSGLAGPPLGL 41
DB 22 THLGIRLPNRSGLAGPPLGL 41
XX
RESULT 155
ADR75329
ID ADR75329 standard; protein; 501 AA.
XX
AC ADR75329;
XX
DT 18-NOV-2004 (first entry)
XX
DE Murine aspartyl protease (Asp)-2 enzyme.
XX
KM Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
KM chromosome identification; Alzheimer's disease; murine; enzyme.
XX
OS Mus musculus.
XX
PN US2004166507-A1.
XX
PD 26-AUG-2004.
XX
PE 29-AUG-2003; 2003US-00652045.
XX
PR 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 13-OCT-1999; 99US-00416901.
XX
PA (GURN/) GURNEY M E.
PA (BIEN/) BIENKOWSKI M J.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
XX
PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
XX
WPI; 2004-624916/60.
DR N-PSDB; ADR75328.
XX
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PT Novel purified/isolated polynucleotide encoding polypeptide having
PT aspartyl protease activity involved in processing amyloid precursor
PT protein into amyloid beta, useful in identifying agent decreasing
PT activity of aspartyl protease.
XX
PS Example 3; SEQ ID NO 8; 107bp; English.
XX
CC The invention relates to nucleic acid sequences encoding aspartyl
CC protease (Asp) polypeptides having aspartyl protease activity involved in
CC processing amyloid precursor protein (APP) into amyloid beta. The
CC invention also relates to a method for identifying an agent that
CC decreases the protease activity of the Asp. Asp DNA is useful in
CC chromosome identification as they can hybridize with a specific location
CC on a human chromosome and in identifying the relationship between genes
CC and diseases (particular gene responsible for causing diseases). It is
CC also useful for identifying candidates to modulate the progression of
CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The
CC present sequence is the murine Asp-2 enzyme. This sequence is used to
CC illustrate the method of the invention.
XX
SQ Sequence 501 AA;
XX
Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 87;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
OY 22 TQHGIRLPNRSGLAGPPLGL 41
DB 22 THLGIRLPNRSGLAGPPLGL 41
XX
RESULT 156
AAU23068
ID AAU23068 standard; protein; 387 AA.
XX
AC AAU23068;
XX
DT 17-DEC-2001 (first entry)
XX
DE Novel human enzyme polypeptide #154.
XX
KW Human; oxidoreductase enzyme; transferase; hydrolase; lyase; isomerase;
KW ligase; hyperproliferative disorder; immunodeficiency disorder;
KW autoimmune disorder; neurological disorder; metabolic disorder;
KW inflammatory disorder; cardiovascular disorder; reproductive disorder;
KW blood-related disorder; infectious disorder; cytostatic; anti arthritic;
KW nephrotropic; anticoagulant.
XX
OS Homo sapiens.
XX
PN WO200155301-A2.
XX
PD 02-AUG-2001.
XX
PE 17-JAN-2001; 2001WO-US001239.
XX
PR 31-JAN-2000; 2000US-0179065P.
PR 04-FEB-2000; 2000US-0180628P.
PR 24-FEB-2000; 2000US-0184664P.
PR 02-MAR-2000; 2000US-0186350P.
PR 16-MAR-2000; 2000US-0189874P.
PR 17-MAR-2000; 2000US-0190076P.
PR 18-APR-2000; 2000US-0198123P.
PR 19-MAY-2000; 2000US-0205515P.
PR 07-JUN-2000; 2000US-0209467P.
PR 28-JUN-2000; 2000US-0214886P.
PR 30-JUN-2000; 2000US-0215135P.
PR 07-JUL-2000; 2000US-0216647P.
PR 07-JUL-2000; 2000US-0216880P.
PR 11-JUL-2000; 2000US-0217487P.
PR 11-JUL-2000; 2000US-0217496P.
PR 14-JUL-2000; 2000US-0218290P.
XX
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CC infectious disorders (e.g. Influenza). The polynucleotides of the  
CC invention can also be used in gene therapy. AAU23915-AAU23814 represent  
CC the novel human enzyme polypeptides of the invention. Note: The sequence  
CC data for this patent did not form part of the printed specification, but  
CC was obtained in electronic format directly from WIPO at  
CC ftp.wipo.int/pub/published\_pct\_sequences  
XX  
SQ Sequence 387 AA;

Query Match 21.2%; Score 22; DB 1; Length 387;  
Best Local Similarity 31.2%; Pred. No. 1.8e+02;  
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Oy 25 GIRLPARGSGAPLG 40  
Db 63 GVVVPYTGKWEGLG 78

## RESULT 157

AAU23069  
ID AAU23069 standard; protein; 390 AA.

XX AC AAU23069;

XX DT 17-DEC-2001 (first entry)

XX DE Novel human enzyme polypeptide #155.

XX Human; oxidoreductase enzyme; transferase; hydrolase; lyase; isomerase;  
KW ligase; hyperproliferative disorder; immunodeficiency disorder;  
KW autoimmune disorder; neurological disorder; metabolic disorder;  
KW inflammatory disorder; cardiovascular disorder; reproductive disorder;  
KW blood-related disorder; infectious disorder; cytotoxic; anti arthritic;  
KW nephrotropic; anticoagulant.

XX OS Homo sapiens.

XX PN WO200155301-A2.

XX PD 02-AUG-2001.

XX PF 17-JAN-2001; 2001WO-US001239.

XX 31-JAN-2000; 2000US-0179065P.  
PR 04-FEB-2000; 2000US-0180628P.  
PR 24-FEB-2000; 2000US-0184684P.  
PR 02-MAR-2000; 2000US-0186350P.  
PR 16-MAR-2000; 2000US-0189874P.  
PR 17-MAR-2000; 2000US-0190076P.  
PR 18-APR-2000; 2000US-0198123P.  
PR 19-MAY-2000; 2000US-0205515P.  
PR 07-JUN-2000; 2000US-0209467P.  
PR 28-JUN-2000; 2000US-0214886P.  
PR 30-JUN-2000; 2000US-0215135P.  
PR 07-JUL-2000; 2000US-0216647P.  
PR 07-JUL-2000; 2000US-0216880P.  
PR 11-JUL-2000; 2000US-0217487P.  
PR 11-JUL-2000; 2000US-0217496P.  
PR 14-JUL-2000; 2000US-0218290P.  
PR 26-JUL-2000; 2000US-0220963P.  
PR 26-JUL-2000; 2000US-0220964P.  
PR 14-AUG-2000; 2000US-0224518P.  
PR 14-AUG-2000; 2000US-0224519P.  
PR 14-AUG-2000; 2000US-0225213P.  
PR 14-AUG-2000; 2000US-0225214P.  
PR 14-AUG-2000; 2000US-0225266P.  
PR 14-AUG-2000; 2000US-0225267P.  
PR 14-AUG-2000; 2000US-0225268P.  
PR 14-AUG-2000; 2000US-0225270P.  
PR 14-AUG-2000; 2000US-0225474P.  
PR 14-AUG-2000; 2000US-0225757P.  
PR 14-AUG-2000; 2000US-0225758P.  
PR 14-AUG-2000; 2000US-0225759P.

PR 18-AUG-2000; 2000US-0226279P.  
PR 22-AUG-2000; 2000US-0226681P.  
PR 22-AUG-2000; 2000US-0226868P.  
PR 23-AUG-2000; 2000US-0227182P.  
PR 30-AUG-2000; 2000US-0227009P.  
PR 01-SEP-2000; 2000US-0228924P.  
PR 01-SEP-2000; 2000US-0229287P.  
PR 01-SEP-2000; 2000US-0229343P.  
PR 01-SEP-2000; 2000US-0229344P.  
PR 01-SEP-2000; 2000US-0229345P.  
PR 05-SEP-2000; 2000US-0229509P.  
PR 05-SEP-2000; 2000US-0229513P.  
PR 06-SEP-2000; 2000US-0230437P.  
PR 06-SEP-2000; 2000US-0230438P.  
PR 08-SEP-2000; 2000US-0231242P.  
PR 08-SEP-2000; 2000US-0231243P.  
PR 08-SEP-2000; 2000US-0231244P.  
PR 08-SEP-2000; 2000US-0231413P.  
PR 08-SEP-2000; 2000US-0231414P.  
PR 08-SEP-2000; 2000US-0232080P.  
PR 08-SEP-2000; 2000US-0232081P.  
PR 12-SEP-2000; 2000US-0231968P.  
PR 14-SEP-2000; 2000US-0232397P.  
PR 14-SEP-2000; 2000US-0232398P.  
PR 14-SEP-2000; 2000US-0232399P.  
PR 14-SEP-2000; 2000US-0232400P.  
PR 14-SEP-2000; 2000US-0232401P.  
PR 14-SEP-2000; 2000US-0233063P.  
PR 14-SEP-2000; 2000US-0233064P.  
PR 14-SEP-2000; 2000US-0233065P.  
PR 21-SEP-2000; 2000US-0234223P.  
PR 21-SEP-2000; 2000US-0234274P.  
PR 25-SEP-2000; 2000US-0234997P.  
PR 25-SEP-2000; 2000US-0234998P.  
PR 26-SEP-2000; 2000US-0235484P.  
PR 27-SEP-2000; 2000US-0235834P.  
PR 27-SEP-2000; 2000US-0235836P.  
PR 29-SEP-2000; 2000US-0236327P.  
PR 29-SEP-2000; 2000US-0236328P.  
PR 29-SEP-2000; 2000US-0236367P.  
PR 29-SEP-2000; 2000US-0236368P.  
PR 29-SEP-2000; 2000US-0236370P.  
PR 02-OCT-2000; 2000US-0236802P.  
PR 02-OCT-2000; 2000US-0237037P.  
PR 02-OCT-2000; 2000US-0237038P.  
PR 02-OCT-2000; 2000US-0237039P.  
PR 02-OCT-2000; 2000US-0237040P.  
PR 13-OCT-2000; 2000US-0239935P.  
PR 13-OCT-2000; 2000US-0239937P.  
PR 20-OCT-2000; 2000US-0240960P.  
PR 20-OCT-2000; 2000US-0241221P.  
PR 20-OCT-2000; 2000US-0241785P.  
PR 20-OCT-2000; 2000US-0241786P.  
PR 20-OCT-2000; 2000US-0241787P.  
PR 20-OCT-2000; 2000US-0241808P.  
PR 20-OCT-2000; 2000US-0241809P.  
PR 20-OCT-2000; 2000US-0241826P.  
PR 01-NOV-2000; 2000US-0244617P.  
PR 08-NOV-2000; 2000US-0246474P.  
PR 08-NOV-2000; 2000US-0246475P.  
PR 08-NOV-2000; 2000US-0246476P.  
PR 08-NOV-2000; 2000US-0246477P.  
PR 08-NOV-2000; 2000US-0246478P.  
PR 08-NOV-2000; 2000US-0246523P.  
PR 08-NOV-2000; 2000US-0246524P.  
PR 08-NOV-2000; 2000US-0246525P.  
PR 08-NOV-2000; 2000US-0246526P.  
PR 08-NOV-2000; 2000US-0246527P.  
PR 08-NOV-2000; 2000US-0246528P.  
PR 08-NOV-2000; 2000US-0246532P.  
PR 08-NOV-2000; 2000US-0246609P.  
PR 08-NOV-2000; 2000US-0246610P.  
PR 08-NOV-2000; 2000US-0246611P.

08-NOV-2000; 2000US-0246613P.  
PR 17-NOV-2000; 2000US-0249207P.  
PR 17-NOV-2000; 2000US-0249208P.  
PR 17-NOV-2000; 2000US-0249209P.  
PR 17-NOV-2000; 2000US-0249210P.  
PR 17-NOV-2000; 2000US-0249211P.  
PR 17-NOV-2000; 2000US-0249212P.  
PR 17-NOV-2000; 2000US-0249213P.  
PR 17-NOV-2000; 2000US-0249214P.  
PR 17-NOV-2000; 2000US-0249215P.  
PR 17-NOV-2000; 2000US-0249216P.  
PR 17-NOV-2000; 2000US-0249217P.  
PR 17-NOV-2000; 2000US-0249218P.  
PR 17-NOV-2000; 2000US-0249245P.  
PR 17-NOV-2000; 2000US-0249246P.  
PR 17-NOV-2000; 2000US-0249265P.  
PR 17-NOV-2000; 2000US-0249297P.  
PR 17-NOV-2000; 2000US-0249299P.  
PR 17-NOV-2000; 2000US-0249300P.  
PR 01-DEC-2000; 2000US-0250160P.  
PR 01-DEC-2000; 2000US-0250391P.  
PR 05-DEC-2000; 2000US-0251030P.  
PR 05-DEC-2000; 2000US-0251988P.  
PR 05-DEC-2000; 2000US-0256719P.  
PR 06-DEC-2000; 2000US-0256719P.  
PR 08-DEC-2000; 2000US-0251479P.  
PR 08-DEC-2000; 2000US-0251856P.  
PR 08-DEC-2000; 2000US-0251868P.  
PR 08-DEC-2000; 2000US-0251869P.  
PR 08-DEC-2000; 2000US-0251989P.  
PR 11-DEC-2000; 2000US-0251990P.  
PR 05-JAN-2001; 2001US-025678P.  
XX  
XX (HUMA-) HUMAN GENOME SCI INC.  
PI Rosen CA, Barash SC, Ruben SM;  
XX  
XX WPI; 2001-465566/50.  
DR N-PSDB; AAS40939.  
XX  
XX Novel polypeptides and polynucleotides useful for diagnosing, preventing,  
PT treating neural, immune system, muscular, reproductive, pulmonary,  
PT cardiovascular, renal, proliferative disorders and cancerous diseases.  
XX  
XX Claim 11; SEQ ID NO 1065; 1180bp; English.  
XX  
XX The present invention relates to the isolation of novel human enzyme  
CC polypeptides, and the cDNA (AAS40785-AAS41684) and genomic sequences  
CC encoding them. The enzyme polypeptides of the invention may comprise the  
CC functional classes of oxidoreductases, transferases, hydrolases, lyases,  
CC isomerases or ligases. The sequences of the invention are useful in the  
CC diagnosis, treatment, prevention and/or prognosis of a wide range of  
CC disorders including hyperproliferative disorders (e.g. cancer),  
CC immunodeficiency disorders (e.g. AIDS) autoimmune disorders (e.g.  
CC arthritis), neurological disorders (e.g. Alzheimer's disease), metabolic  
CC cardiovascular disorders (e.g. atherosclerosis), blood-related disorders  
CC (e.g. haemophilia), reproductive disorders (e.g. infertility) and  
CC infectious disorders (e.g. influenza). The polynucleotides of the  
CC invention can also be used in gene therapy. AAU2915-AAU2814 represent  
CC the novel human enzyme polypeptides of the invention. Note: The sequence  
CC data for this patent did not form part of the printed specification, but  
CC was obtained in electronic format directly from WIPO at  
CC ftp.wipo.int/pub/published\_pct\_sequences  
XX  
XX Sequence 390 AA;

Query Match 21.2%; Score 22; DB 1; Length 390;  
Best Local Similarity 31.2%; Pred. No. 1.8e+02;  
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;  
QY 25 GIRLPURSGIGAPLG 40

DB 66 GVYVPTQGWKWBELG 81

RESULT 158  
ID ADC81581 standard; protein; 391 AA.

AC ADC81581;  
DT 01-JAN-2004 (first entry)

DE Beta-secretase (1fk) amino acid sequence SEQ ID NO:4.

KW human; BACE; modification; Pro33lys; pro-enzyme.

OS Unidentified.

PN W02003072733-A2.

FD 04-SEP-2003.

PF 21-FEB-2003; 2003WO-US005508.

PR 21-FEB-2002; 2002US-0358651P.

PA (PHAA) PHARMACIA & UPJOHN CO.

XX Chou K, Howe JW;  
XX WPI; 2003-712719/67.

PT BACE polypeptides having Pro33lys modification, useful in determining  
PT possible mutations, which will inhibit enzyme activity, and in  
PT determining potential active site for target molecules.

PS Disclosure; Fig 3; 38pp; English.

XX The present invention describes an isolated polypeptide (1) comprising or  
CC consisting of a fully defined sequence of 432 amino acids (see ADC81561),  
CC and comprising human BACE having the modification Pro33lys. Also  
CC described: (1) a composition comprising an active human BACE enzyme  
CC comprising the pro-enzyme sequence of BACE having the modification  
CC Pro33lys; (2) an isolated polynucleotide comprising a sequence encoding  
CC (1); (3) an isolated polynucleotide consisting or comprising of  
CC nucleotides 70-1365 of a 1355-bp sequence (see ADC81562); (4) an  
CC expression vector comprising the polynucleotide of (2), or a  
CC polynucleotide sequence encoding a Pro33lys-BACE polypeptide, where the  
CC expression vector can produce the Pro33lys-BACE polypeptide when present  
CC in a compatible host cell, when cultured under conditions that allow  
CC production; (5) a recombinant host cell comprising the expression vector;  
CC and (6) producing a (active) Pro33lys-BACE polypeptide. The BACE  
CC polypeptide having Pro33lys modification may be used in determining  
CC determining mutations, which will inhibit enzyme activity, and in  
CC determining potential active site for target molecules. The vector  
CC comprising the BACE polynucleotide is useful for producing recombinant  
CC BACE polypeptides having Pro33lys modification. The present sequence  
CC represents a beta-secretase amino acid sequence, which is used in the  
CC exemplification of the present invention.

SO Sequence 391 AA;

Query Match 21.2%; Score 22; DB 1; Length 391;  
Best Local Similarity 31.2%; Pred. No. 1.8e+02;  
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY 25 GIRLPURSGIGAPLG 40  
DB 72 GVYVPTQGWKWBELG 87

RESULT 159  
AD164643

ID AD164643 standard; protein; 403 AA.  
XX  
AC AD164643;  
XX  
DT 22-APR-2004 (first entry)  
XX  
DE Mature human beta-secretase (BACE) protein seq id 4.  
XX  
KM crystal; glycosylated human beta-secretase; BACE; human beta-secretase;  
XX protein co-ordinate data.  
XX  
OS Homo sapiens.  
XX  
PN US2004014194-A1.  
XX  
PD 22-JAN-2004.  
XX  
PF 26-MAR-2003; 2003US-00400273.  
XX  
PR 27-MAR-2002; 2002US-0367937P.  
XX  
PA (SCHE ) SCHERING CORP.  
XX  
PI Beyer BM, Hammond GS, Reichert P, Strickland C, Wang W, Weber PC;  
PI Wong GT, Zhang L;  
XX  
DR WPI; 2004-167920/16.  
XX  
PT New crystal comprising a glycosylated, human beta-secretase polypeptide,  
PT useful for determining the three-dimensional structure of beta-secretase  
PT and other related proteins.  
XX  
PS Claim 5; SEQ ID NO 4; 107pp; English.  
XX  
CC The invention describes a crystal comprising a glycosylated, human beta-  
CC secretase polypeptide characterised by structural coordinates comprising  
CC a root mean square deviation of conserved residue backbone atoms of less  
CC than 1.5 Angstrom when superimposed on backbone atoms described by  
CC structural coordinates. The crystal is useful for determining the three-  
CC dimensional structure of beta-secretase and other related proteins. This  
CC is the amino acid sequence of a mature human beta-secretase (BACE)  
CC protein.  
XX  
SQ Sequence 403 AA;  
XX  
QY Query Match 21.2%; Score 22; DB 1; Length 403;  
Best Local Similarity 31.2%; Pred. No. 1.8e+02;  
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;  
XX  
DB 25 GIRLPLNSGLGAPLG 40  
80 GVVVPTGTGKWEIG 95  
XX  
RESULT 160  
AD164644  
ID AD164644 standard; protein; 408 AA.  
XX  
AC AD164644;  
XX  
DT 22-APR-2004 (first entry)  
XX  
DE Mature human beta-secretase (BACE) protein seq id 5.  
XX  
KM crystal; glycosylated human beta-secretase; BACE; human beta-secretase;  
KM protein co-ordinate data.  
XX  
OS Homo sapiens.  
XX  
PN US2004014194-A1.  
XX  
PD 22-JAN-2004.  
XX

PF 26-MAR-2003; 2003US-00400273.  
XX  
PR 27-MAR-2002; 2002US-0367937P.  
XX  
PA (SCHE ) SCHERING CORP.  
XX  
PI Beyer BM, Hammond GS, Reichert P, Strickland C, Wang W, Weber PC;  
PI Wong GT, Zhang L;  
XX  
DR WPI; 2004-167920/16.  
XX  
PT New crystal comprising a glycosylated, human beta-secretase polypeptide,  
PT useful for determining the three-dimensional structure of beta-secretase  
PT and other related proteins.  
XX  
PS Claim 5; SEQ ID NO 5; 107pp; English.  
XX  
CC The invention describes a crystal comprising a glycosylated, human beta-  
CC secretase polypeptide characterised by structural coordinates comprising  
CC a root mean square deviation of conserved residue backbone atoms of less  
CC than 1.5 Angstrom when superimposed on backbone atoms described by  
CC structural coordinates. The crystal is useful for determining the three-  
CC dimensional structure of beta-secretase and other related proteins. This  
CC is the amino acid sequence of a mature human beta-secretase (BACE)  
CC protein.  
XX  
SQ Sequence 408 AA;  
XX  
QY Query Match 21.2%; Score 22; DB 1; Length 408;  
Best Local Similarity 31.2%; Pred. No. 1.8e+02;  
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;  
XX  
DB 25 GIRLPLNSGLGAPLG 40  
85 GVVVPTGTGKWEIG 100  
XX  
RESULT 161  
AD164640  
ID AD164640 standard; protein; 411 AA.  
XX  
AC AD164640;  
XX  
DT 22-APR-2004 (first entry)  
XX  
DE Mature human beta-secretase (BACE) protein seq id 1.  
XX  
KM crystal; glycosylated human beta-secretase; BACE; human beta-secretase;  
KM protein co-ordinate data.  
XX  
OS Homo sapiens.  
XX  
PN US2004014194-A1.  
XX  
PD 22-JAN-2004.  
XX  
PF 26-MAR-2003; 2003US-00400273.  
XX  
PR 27-MAR-2002; 2002US-0367937P.  
XX  
PA (SCHE ) SCHERING CORP.  
XX  
PI Beyer BM, Hammond GS, Reichert P, Strickland C, Wang W, Weber PC;  
PI Wong GT, Zhang L;  
XX  
DR WPI; 2004-167920/16.  
XX  
PT New crystal comprising a glycosylated, human beta-secretase polypeptide,  
PT useful for determining the three-dimensional structure of beta-secretase  
PT and other related proteins.  
XX  
PS Claim 5; SEQ ID NO 1; 107pp; English.  
XX



PT	New Beta-site APP cleaving enzyme (BACE), proteins and protein crystal,
PT	useful in designing compounds that inhibit or modulate BACE, in drug
PT	screening assays, and in identifying receptors.
XX	
PS	Disclosure; Fig 2A; 272pp; English.
XX	
CC	The invention relates to a new crystalline form of Beta-site APP cleaving
CC	enzyme (BACE) or its functional portion having an active site containing
CC	one or more ligands other than the natural substrate or the substrate
CC	that occurs naturally or physiologically within the active site.
CC	Inhibitors of BACE protein or its functional portion is useful for
CC	preparing a composition or medicament for inhibiting BACE or the
CC	production of A-beta or its fragments, and in therapy for treating
CC	Alzheimer's disease. The BACE crystals and proteins may be used to design
CC	compounds that inhibit or modulate BACE, in drug screening assays, and in
CC	identifying receptors. This sequence represents a fragment of the full
CC	length BACE protein from amino acid 76 to the C-terminus.
XX	
XX	Sequence 414 AA;
XX	
Query Match	21.2%; Score 22; DB 1; Length 414;
Best Local Similarity	31.2%; Pred. No. 1.8e+02;
Matches	5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
Oy	25 GIRLPRLRSGLGAPLG 40
	:
Db	82 GVVYVPTQGWKEGELG 97
XX	
RESULT 166	
AAB07899	
ID	AAB07899 standard; protein; 415 AA.
XX	
AC	AAB07899;
XX	
DT	14-NOV-2000 (first entry)
XX	
DE	Amino acid sequence of a human beta-secretase enzyme fragment.
XX	
KW	Beta-secretase; beta-amyloid precursor protein; beta-amyloid peptide;
KM	amyloid plaque component; Alzheimer's disease; amyloidogenic disease;
KM	inhibitor.
XX	
XX	Homo sapiens.
OS	
XX	
XX	WO200047618-A2.
PN	
XX	
PD	17-AUG-2000.
XX	
PF	10-FEB-2000; 2000WO-US003819.
XX	
PR	10-FEB-1999; 99US-0119571P.
XX	
PR	15-JUN-1999; 99US-0139172P.
XX	
PA	(ELAN-) ELAN PHARM INC.
XX	
PI	Anderson JP, Basi G, Doane MT, Frigon N, John V, Power M;
PI	Sinha S, Tatsuno G, Tung J, Wang S, Mcconlogue L;
XX	
XX	WPI; 2000-533011/48.
DR	
PT	Purified beta-secretase protein used in assays to discover inhibitors
PT	which can be used for the treatment of amyloidogenic diseases e.g.
PT	Alzheimer's disease.
XX	
XX	
PS	Claim 10; Fig 3B; 121pp; English.
XX	
CC	The specification describes a beta-secretase enzyme. The enzyme cleaves
CC	beta-amyloid precursor protein to produce beta-amyloid peptide. This
CC	enzyme is therefore implicated in the production of amyloid plaque
CC	components which accumulate in the brains of individuals afflicted with
CC	Alzheimer's disease. Inhibitors of beta-secretase are administered to a
CC	mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-

CC like pathology to test if they maintain or improve cognitive ability or  
CC reduce the plaque burden. The compounds are used for the treatment of  
CC amyloidogenic diseases e.g. Alzheimer's disease. The present sequence  
CC represents a human beta-secretase enzyme fragment  
XX  
SQ Sequence 415 AA;

Query Match	21.2%	Score 22	DB 1	Length 415
Best Local	31.2%	Pred. NO.	1.8e+02	
Matches	5	Conservative	2	Mismatches 9
				Indels 0
				Gaps 0

```
QY      25 GIRLPLRSGLGAPLG 40
      82 GVVVPTYQGKWEGETG 97
Db
```

RESULT 167  
ADJ57792  
ID ADJ57792 standard; protein; 417 AA.  
vv

Query Match	21.2%;	Score 22;	DB 1;	Length 417;
Best Local Similarity	31.2%;	Pred. No. 1.8e+02;		
Matches	5;	Conservative	2;	Mismatches 9;
				Indels 0;
				Gaps 0;

Qy	25	GIRLPLRSGLGAPLG	40
		: :	
Db	85	GVYVPYTGKMEGELG	100

RESULT 168  
AAV88437  
ID AAV88437 standard; protein; 425 AA

XX	AA18437;
AC	
XX	
DT	03-AUG-2000 (first entry)
XX	

```

Query Match      21.2%   Score 22;  DB 1;  Length 425;
Best Local Similarity 31.2%   Pred. No. 1.8e+02;
Matches      5;  Conservative      2;  Mismatches      9;  Indels      0;
QY      25  GIRLPLRSLGCGAPYG 40
      |:.:|||
      99  GYVVEYTOQKWEGBLG 114

```

Qy 25 G I R L P L R S G L G A P L G 40  
| : : | |  
Db 99 G V Y V P Y T Q G K W E G E L G 114

RESTLT 169  
AAU07214  
ID AAU07214 standard; protein; 425 AA.  
XX  
XX AAU07214;  
AC  
DT 11-SEP-2003 (revised)  
DT 24-OCT-2001 (first entry)  
XX  
XX  
XX  
XX  
XX T7-caspase-caspase 8-human asparcyl protease 2a delcattm.

KM		Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;
KM		aspartyl protease 2; Asp2; amyloid protein precursor; APP;
KM		beta-secretase; Alzheimer's disease.
XX		
XX		Homo sapiens.
OS		Enterobacteria phage T7.
XX		
XX		WO200149097-A2.
PR		
XX		
XX		12-JUL-2001.
PD		
XX		
Pf		09-MAY-2001; 2001WO-IB000797.
XX		
PR		09-MAY-2001; 2001WO-IB000797.
XX		
PA	(BIEN)/ BIENKOWSKI M J.	
PA	(GURNE)/ GURNEY M E.	
PA	(HEIN)/ HEINRIKSON R L.	
PA	(PARO)/ PARODI L A.	
XX	(YANR)/ YAN R.	
PI	Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R,	
DR	MPJ, 2001-502548/55.	
DR	N-PESDB; AAS11714.	
PT		
PT	Novel purified polypeptide comprising fragment of mammalian aspartyl	
PT	protease 2, lacking Asp2 transmembrane domain and retaining beta	
PT	secretase activity of Asp2 useful for identifying inhibitors of Asp2	
PT	activity.	
PS	Example 9; Page 158-159; 185pp; English.	
CC	The invention relates to a novel purified polypeptide comprising a	
CC	fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the	
CC	Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide	
CC	and the fragment retain the beta-secretase activity of the mammalian Asp2	
CC	protein. Also included is an isoform of amyloid protein precursor (APP)	
CC	comprising the amino acid sequence of a APP or its fragment containing an	
CC	APP cleavage site recognizable by a mammalian beta-secretase, and further	
CC	comprising two lysine residues at the carboxyl terminus of the amino acid	
CC	sequence of the mammalian APP or APP fragment. The polypeptides are used	
CC	for assaying for modulators of beta-secretase activity; identifying	
CC	agents that inhibit the APP processing activity of human Asp2 aspartyl	
CC	protease (Hu-Asp2); identifying agents that modulate the activity of Asp2	
CC	; and for reducing cellular production of amyloid beta (Abeta) from APP.	
CC	Agents identified by the above methods are useful for treating	
CC	Alzheimer's disease; and for identifying modulators of amyloid-beta	
CC	(Abeta) peptide production, for use in designing therapeutics for the	
CC	treatment or prevention of Alzheimer's disease. Probes and primers	
CC	derived from Asp nucleic acid sequences are useful for detecting Hu-Asp	
CC	nucleic acids in vitro assays and in Northern and Southern blots. The	
CC	present sequence represents the amino acid sequence of T7-caspase-caspase	
CC	8-human-Asp-2a delta TM construct which has a T7 tag, a caspase 8 leader	
CC	sequence and cleavage site, and lacks the transmembrane domain. This	
CC	construct was used for bacterial expression and purification of human	
CC	Asp2a. (Updated on 11-SEP-2003 to standardise OS field)	
XX		
SQ	Sequence 425 AA;	
	Query Match	21.2%; Score 22; DB 1; Length 425;
	Best Local Similarity	31.2%; Pred. No. 1.8e+02;
	Matches	5; Conservative 2; Mismatches 9; Indels 0; Gaps 0
Oy	25 GIRLPARGGLGAPRG 40	
	: :	
Dd	99 GVYVYPTQGKEGELG 114	
RESULT 170		
AAE10641		
ID	AAE10641 standard; protein; 425 AA.	
XX		

AC		AAE10641;	
XX	DT	10-DEC-2001	(First entry)
XX	DE	T7-Caspase-Caspase 8 cleavage-human-pro-Asp2(a) lacking TM domain.	
XX			
XX		Human; aspartyl protease 1; Aspl; amyloid precursor protein; App;	
KM		Alzheimer's disease; AbJ dementia; neurofibrillary tangle; gliosis;	
KW		amyloid plaque; neuronal loss; proteolytic; nootropic; neuroprotective;	
XX		T7-Caspase-Caspase 8 Cleavage-Human-pro-Asp 2(a) protein.	
XX			
OS		homo sapiens.	
OS		Synthetic.	
PN		GB2357767-A.	
XX			
PD		04-JUL-2001.	
XX			
PF		22-SEP-2000; 2000GB-00023315.	
PR			
PR		23-SEP-1999; 99US-00404133.	
PR		23-SEP-1999; 99US-0155493P.	
PR		23-SEP-1999; 99MO-US020861.	
PR		13-OCT-1999; 99US-00416901.	
PR		06-DEC-1999; 99US-0169232P.	
PA		(PHARMA ) PHARMACIA & UPJOHN CO.	
PI		Bienkowskeki MJ, Gurney M;	
XX		WPT; 2001-444208/48.	
DR		N-PsDB; AAD17877.	
PT		Polyptide comprising fragments of human aspartyl protease with amyloid	
PT		precursor protein processing activity and alpha-secretase activity, for	
PT		identifying modulators useful in treating Alzheimer's disease.	
XX			
XX		Example 9; Page 129-130; 187pp; English.	
PS			
CC		The patent discloses human aspartyl protease 1 (hu-Aspl) or modified Aspl	
CC		proteins which lack transmembrane domain or amino terminal domain or	
CC		cyclopentimic domain and retains alpha-secretase activity and amyloid	
CC		protein precursor (APP) processing activity. The proteins of the	
CC		invention are useful for assaying hu-Aspl alpha-secretase activity, which	
CC		in turn is useful for identifying modulators of hu-Aspl alpha-secretase	
CC		activity, where modulators that increase hu-Aspl alpha-secretase activity	
CC		are useful for treating Alzheimer's disease (AD) which causes progressive	
CC		dementia with consequent formation of amyloid plaques, neurofibrillary	
CC		tangles, gliosis and neuronal loss. Hu-Aspl protease substrate is useful	
CC		for assaying hu-Aspl proteolytic activity, by contacting hu-Aspl protein	
CC		with the substrate under acidic conditions and determining the level of	
CC		hu-Aspl proteolytic activity. The present sequence is T7-Caspase- Caspase	
CC		8 cleavage-human-pro-Asp 2(a) protein lacking a transmembrane (TM)	
CC		domain. This sequence is generated from human Asp 2(a) protein by the	
CC		addition of T7 tag and caspase 8 leader sequence at its N-terminal end	
CC		and deletion of its C-terminal transmembrane domain	
XX			
SQ		Sequence 425 AA:	
OY			
DB			
Query Match	21.2%	Score 22;	DB 1; Length 425;
Best Local Similarity	31.2%;	Pred. No. 1.8e+02;	
Matches	5; Conservative	2; Mismatches	9; Indels
		Gaps	0;
	25 GIRLPRLNSGLGAPLG	40	
	: :   :		
	99 GVYPVPTOGKWESELG	114	
RESULT 171			
ID	AAE06871		
XX	AAE06871 standard; protein; 425 AA.		
AC	AAE06871;		



```

XX 23-OCT-2001 (first entry)
DT
XX T7-Caspase-Caspase 8 cleavage-Human-pro-Asp2(a) delta TM protein.
DE
XX Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
KW neuroprotective; antisense therapy; gene therapy;
KW caspase-caspase 8 cleavage-pro-Asp2(a) delta TM protein.
XX
OS Homo sapiens.
OS Synthetic.
XX
XX WO200150829-A2.
XX
XX 19-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000799.
XX
XX 09-MAY-2001; 2001WO-IB000799.
XX
XX (BIEN/) BIENKOWSKI M J.
PA (GURNEY) GURNEY M E.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
PI
XX WPI; 2001-483072/52.
XX
XX N-PSDB; AAD13033.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 9; Page 158-159; 185pp; English.
XX
XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
CC precursor protein (APP) isoforms and their corresponding DNA molecules.
CC Human aspartyl proteases can act as beta-secretase proteases useful for
CC treating Alzheimer's disease. APP isoforms are useful for identifying
CC modulators of amyloid-beta peptide production, for use in designing
CC therapeutics for the treatment and prevention of Alzheimer's disease,
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
CC and neuronal loss. APP isoforms are also used in methods for identifying
CC inhibitors and modulators of human Asp2 activity. The invention relates
CC to a method for identifying agents that modulate the activity of human
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
CC as a means to screen in cellular assays for the inhibitors of beta- and
CC gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-
CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.
CC The present sequence is T7-Caspase-Caspase 8 cleavage-Human-pro-Asp2(a)
CC protease 2a (Asp2a) delta TM protein which is obtained by the addition of
CC T7 tag and caspase 8 leader sequence at the N-terminal end and deletion
CC of the transmembrane domain at the C-terminal end of Hu-Asp2a. Human
CC Asp2a has beta-secretase activity
XX
SQ Sequence 425 AA;

```

```

Query Match 21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 1.8e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

```

```

QY 25 GIRLPRLRSGLGAPLG 40
   | : | | | |
Db 99 GVVVPTVGKMEGELG 114

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RESULT 172

```

AAE02593
ID AAE02593 standard; protein; 425 AA.
XX
XX AAE02593;
AC
XX 10-AUG-2001 (first entry)
DT
XX T7-Caspase-Caspase 8 cleavage-human-pro-Asp-2(a) delta TM protein.
DE
XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;
KW Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp2a;
KW beta-secretase; caspase-caspase 8-Asp-2a delta TM.
XX
XX Homo sapiens.
OS Synthetic.
XX
XX WO200123533-A2.
XX
XX 05-APR-2001.
XX
XX 22-SEP-2000; 2000WO-US026080.
XX
XX 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
XX
XX (PHMA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney M, Bienkowski MJ;
PI
XX WPI; 2001-290516/30.
XX
XX N-PSDB; AAD06751.
XX
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor
PT protein, useful for the treatment of Alzheimer's disease.
XX
XX Example 9; Page 157-158; 189pp; English.
XX
XX The present invention relates to enzymes for cleaving the alpha-
CC secretase site of the amyloid precursor protein (APP) and methods of
CC identifying those enzymes. The methods may be used to identify enzymes
CC that may be used to cleave the alpha-secretase cleavage site of the APP
CC protein. The enzymes may be used to treat or modulate the progress of
CC Alzheimer's disease. The present sequence is human Aspartyl protease 2a
CC (Asp-2a) caspase-caspase 8-delta TM protein which is obtained by deleting
CC the transmembrane domain and adding a T7-caspase leader sequence at the N
CC terminal end. This sequence has beta-secretase protease activity
XX
XX
SQ Sequence 425 AA;

```

```

Query Match 21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 1.8e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

```

```

QY 25 GIRLPRLRSGLGAPLG 40
   | : | | | |
Db 99 GVVVPTVGKMEGELG 114

```

```

RESULT 173
AAU06615
ID AAU06615 standard; protein; 425 AA.
XX
XX AAU06615;
AC
XX 24-OCT-2001 (first entry)
DT
XX T7-Caspase-caspase-8-Human-pro-Asp 2(a) delta TM fusion protein.
DE
XX Human; Aspartyl protease; beta-secretase; nootropic; ASP2;
KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
KW amyloid-beta; Abeta; T7-Caspase-caspase 8-Human-pro-Asp 2(a) delta TM.

```

XX	OS	Homosapiens.	Location/Qualifiers
XX	XX	Homosapiens. <td>1..14</td>	1..14
XX	XX	Synthetic. <td>/label= T7 tag</td>	/label= T7 tag
XX	XX	Key <td>/note= "Aids purification when expressed in E. c"</td>	/note= "Aids purification when expressed in E. c"
XX	XX	Peptide <td>15..29</td>	15..29
XX	XX	Peptide <td>/label= Signal peptide</td>	/label= Signal peptide
XX	XX	Peptide <td>/note= "Caspase leader sequence"</td>	/note= "Caspase leader sequence"
XX	XX	Cleavage-site <td>30..33</td>	30..33
XX	XX	Cleavage-site <td>/label= Caspase_8_cleavage_site</td>	/label= Caspase_8_cleavage_site
XX	XX	Protein <td>35..425</td>	35..425
XX	XX	Protein <td>/label= Mature_Asp_2(a)</td>	/label= Mature_Asp_2(a)
XX	XX	WO200149098-A2. <td></td>	
XX	XX	12-JUL-2001. <td></td>	
XX	XX	09-MAY-2001; 2001WO-IB000798. <td></td>	
XX	XX	09-MAY-2001; 2001WO-IB000798. <td></td>	
XX	XX	(BIEN/) BIENKOWSKI M J. <td></td>	
XX	XX	(GURN/) GURNEY M E. <td></td>	
XX	XX	(HEIN/) HEINRIKSON R L. <td></td>	
XX	XX	(PARO/) PARODI L A. <td></td>	
XX	XX	(YANR/) YAN R. <td></td>	
XX	XX	Blenkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R; <td></td>	
XX	XX	MP1; 2001-502549/55. <td></td>	
XX	XX	N-PSDB; AAS11529. <td></td>	
XX	XX	Novel purified polypeptide comprising fragment of mammalian aspartyl <td></td>	
XX	XX	protease 2, lacking Asp2 transmembrane domain and retaining beta <td></td>	
XX	XX	secretase activity of Asp2 useful for identifying inhibitors of Asp2 <td></td>	
XX	XX	activity. <td></td>	
XX	XX	Example 9; Page 158-159; 185pp; English. <td></td>	
XX	XX	The invention relates to a purified polypeptide comprising a fragment of <td></td>	
XX	XX	mammalian aspartyl protease (Asp)2 protein which lacks the Asp2 <td></td>	
XX	XX	transmembrane domain and the Asp2 protein, and where the polypeptide and <td></td>	
XX	XX	the fragment, retain the beta-secretase activity of the mammalian Asp2 <td></td>	
XX	XX	protein. The invention also details polynucleotides for the Asp proteins <td></td>	
XX	XX	and vectors expressing them, and a polypeptide (isotom of amyloid <td></td>	
XX	XX	protein precursor (APP) comprising the amino acid sequence of an APP or <td></td>	
XX	XX	its fragment containing an APP cleavage site recognizable by a mammalian <td></td>	
XX	XX	beta-secretase, and further comprising two lysine residues at the <td></td>	
XX	XX	carboxyl terminus of the amino acid sequence of the mammalian APP or APP <td></td>	
XX	XX	fragment. Also included in the invention are methods of identifying <td></td>	
XX	XX	modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are <td></td>	
XX	XX	useful for treating Alzheimer's disease. APP is useful in methods for <td></td>	
XX	XX	identifying inhibitors or modulators of human Asp2 activity and amyloid- <td></td>	
XX	XX	beta (Abeta) peptide production. APP is also useful in designing <td></td>	
XX	XX	therapeutics for the treatment or prevention of Alzheimer's disease. APP <td></td>	
XX	XX	comprising the App-Sv-beta-secretase peptide sequence (NLDA), which is <td></td>	
XX	XX	associated with increased levels of Abeta processing is useful in assays <td></td>	
XX	XX	relating the Alzheimer's research. The expression vector is useful for <td></td>	
XX	XX	recombinantly expressing APP. Nucleic acids that hybridise to Asp <td></td>	
XX	XX	oligonucleotides are useful as probes or primers. The probes are useful <td></td>	
XX	XX	for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and <td></td>	
XX	XX	Southern blots. The present sequence is 17-caspase-8-Human-pro- <td></td>	
XX	XX	Asp 2(a) delta TM fusion protein which has an N-terminal T7 tag to aid <td></td>	
XX	XX	purification when expressed in E. coli, a Caspase leader sequence and a <td></td>	
XX	XX	caspase 8 cleavage signal to aid cleavage of the signal peptide <td></td>	
XX	XX	Sequence 425 AA; <td></td>	
XX	XX	Query Match 21.2%; Score 22; DB 1; Length 425; <td></td>	
XX	XX	Best Local Similarity 31.2%; Pred No. 1.8e+02; <td></td>	

Matches	5;	Conservative	2;	Mismatches	9;	Indels	0;	Gaps	0;
---------	----	--------------	----	------------	----	--------	----	------	----

  

Qy	25	GIRLPRLSSGLGAPLG	40
	:		
Db	99	GYYVPYTGKKEGELG	114

  

RESULT 174
AB878602
ID AB878602 standard; protein; 425 AA.
XX
AC AB878602;
XX
DT 16-JUL-2002 (first entry)
XX
DE T7-caspase-caspase 8 cleavage-human-pro-Asp-2(a)deltaTM protein.
XX
KM Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;
KM amyloid precursor protein; App.
XX
OS Homo sapiens.
XX
PN GB2367060-A.
XX
PD 27-MAR-2002.
XX
29-OCT-2001; 2001GB-00025934.
XX
23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155453P.
PR 23-SEP-1999; 99WD-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
PR 22-SEP-2000; 2000GB-00023315.
XX
(PDBA ) PHARMACIA & UPJOHN CO.
PA
PI Blenkowksi MJ, Gurney M;
XX
DR WPI; 2002-397167/43.
DR N-PSDB; ABL52469.
XX
PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl
PT protease activity, e.g. for the diagnosis of Alzheimer's disease.
XX
XX
BS Example 9; Page 129-130; 182pp; English.
XX
XX
CC The present invention describes a human aspartyl protease 1 (hu-Asp1)
CC substrate (I) which comprises a peptide of no more than 50 amino acids,
CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-
CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1
CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with
CC (1) under acidic conditions; and (b) determining the level of hu-Asp1
CC proteolytic activity; (2) a purified polynucleotide (III) comprising a
CC nucleotide sequence that hybridises under stringent conditions to the non
CC coding strand complementary to a defined 1804 nucleotide sequence (see
CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1
CC proteolytic activity and lacks nucleotides encoding a transmembrane
CC domain); (3) a purified polynucleotide (III') comprising a sequence that
CC hybridises under stringent conditions to (III) (the nucleotide sequence
CC encodes a polypeptide further lacking a pro-peptide domain corresponding
CC to amino acids 23-62 of hu-Asp1 (see ABL78589)); (4) a vector (IV)
CC comprising (III) or (III'); and (5) a host cell (V) transformed or
CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease
CC substrate (I) may be used as an enzyme substrate in assays to detect
CC aspartyl protease activity, (II) and therefore diagnose diseases
CC associated with aberrant hu-Asp1 expression and activity such as
CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while
CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present
CC sequence represents T7-caspase-caspase 8 cleavage-human-pro-Asp-2(a)
CC deltaTM, which is given in an example from the present invention
XX
Sequence 425 AA;
XX





```

XX AAW59808;
AC
XX 26-OCT-1998 (first entry)
DT
XX
DE Partial amino acid sequence of human ASP2 (aspartic protease 2).
XX
KW Human; ASP2; aspartic protease 2; agonist; antagonist; immunospecific;
KW antibody; inhibition; Alzheimer's disease; cancer; proteinase;
KW prohormone processing.
XX
OS Homo sapiens.
XX
FH Key
FH Location/Qualifiers
FT 445
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 492
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 530
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 542
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 606
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 615
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 625
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 631
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 659
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 671
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 677
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 718
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 722
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 727
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 752
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 762
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 764
FT Misc-difference
FT /note= "encoded by NNA"
FT 770
FT Misc-difference
FT /label= "unknown"
FT /note= "encoded by TGN"
FT 776
FT Misc-difference
FT /label= "unknown"
FT /note= "encoded by GNC"
FT 778
FT Misc-difference
FT /label= "unknown"
FT /note= "encoded by NTT"
FT 779
FT Misc-difference
FT /note= "Stop codon specified in the protein"
FT 780
FT Misc-difference
FT /label= "unknown"
FT /note= "encoded by GNG"
FT 781
FT Misc-difference
FT /label= "unknown"
FT /note= "encoded by NCC"
FT 782
FT Misc-difference
FT /label= "unknown"
FT /note= "encoded by NCT"
FT 783
FT Misc-difference
FT /label= "unknown"
FT /note= "encoded by TNT"
FT /label= "unknown"
FT /note= "encoded by ATN"

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```

FT Misc-difference 784
FT /label= "unknown"
FT /note= "encoded by TNA"
FT Misc-difference 785
FT /label= "unknown"
FT /note= "encoded by TNC"
FT Misc-difference 790
FT /label= "unknown"
FT /note= "encoded by MNG"
XX
XX EP855444-A2.
XX
XX 29-JUL-1998.
XX
XX 27-JAN-1998; 98EP-00300573.
XX
XX 28-JAN-1997; 97GB-00001684.
XX
XX (SMIK ) SMITHKLINE BEECHAM PLC.
XX (SMIK ) SMITHKLINE BEECHAM CORP.
XX
XX Powell DV, Smith TS, Chapman CG, Murphy K;
XX WPI; 1998-389809/34.
XX N-PSDB; AAV41697.
XX
XX New nucleic acid encoding human aspartic protease 2 - used to treat,
XX prevent and diagnose e.g. Alzheimer's disease, cancer and prohormone
XX processing.
XX
XX Disclosure; Page 9; 26pp; English.
XX
XX This is the amino acid sequence of the partial human ASP2 (aspartic
XX protease 2), used in the method of the invention. Agonists and
XX antagonists for ASP2 immunospecific antibodies are used to treat
XX conditions requiring increased or decreased activity or expression of
XX ASP2 respectively. ASP2 is used to treat and diagnose e.g. Alzheimer's
XX disease, cancer and prohormone processing and ASP2 or a fragment can be
XX used to induce an immune response against the above conditions
XX
XX Sequence 790 AA:
XX
XX Query Match 20.2%; Score 21; DB 1; Length 790;
XX Best Local Similarity 62.5%; Pred. No. 1.8e+02;
XX Matches 5; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
XX
XX QY 27 RLPLRSGU 34
XX DB 570 RLPLRVSU 577
XX
XX RESULT 180
XX ADP83926
XX ID ADP83926 standard; peptide; 28 AA.
XX
XX AC ADP83926;
XX
XX 23-SEP-2004 (first entry)
XX
XX Human BACE1 isoform A protease domain SEQ ID NO:52.
XX
XX human; beta-site amyloid precursor protein cleaving enzyme 1;
XX beta-site APP cleaving enzyme 1; BACE1; BACE1 isoform A; prodomain;
XX engineered cleavage site; protease domain; neuroprotective; nootropic;
XX gene therapy; Alzheimer's disease; Down's syndrome.
XX
XX Homo sapiens.
XX
XX WO2004056962-A2.
XX
XX 08-JUL-2004.
XX
XX 02-DEC-2003; 2003WO-US038314.
XX

```

XX 04-DEC-2002; 2002US-0430984P.  
PR  
XX  
PA (SUNE-) SUNESIS PHARM INC.  
XX  
PI Ballinger M;  
XX  
DR WPI: 2004-507703/48.

XX New polypeptides for producing homogenously processed preparations of  
PT beta site amyloid precursor protein-cleaving enzyme comprises a  
PT prodomain, an engineered cleavage site and a protease domain.  
XX

PS Claim 5; SEQ ID NO 52; 40pp; English.

CC The present invention describes a polypeptide (I) comprising in order  
CC from the N-terminus to the C-terminus: (a) a prodomain comprising at  
CC least 6 contiguous amino acids of the 16 amino acid sequence of SEQ ID  
CC NO:3 (ADP83877, comprising residues 22-37 of SEQ ID NO:1 (ADP83876) which  
CC is the longest isoform of human beta-site amyloid precursor protein (APP)  
CC cleaving enzyme 1 (BACE1), isoform A); (b) an engineered cleavage site;  
CC and (c) a protease domain. (I) is capable of being cleaved at the  
CC engineered cleavage site, and so releases a free protease domain that has  
CC BACE1 activity. Also described: (1) a nucleic acid sequence encoding (I);  
CC (2) a vector for expression of (1); and (3) a host cell expressing (1).  
CC (1) has neuroprotective and nootropic activities, and can be used in gene  
CC therapy. (I) can be used for producing preparations of homogenously  
CC processed BACE that may be used for e.g. studying or treating diseases  
CC such as Alzheimer's disease or Down's syndrome. The human BACE1 gene is  
CC located on chromosome 11, more specifically to 11q23.2-23.3. The present  
CC sequence represents a human BACE1 isoform A protease domain amino acid  
CC sequence, which is used in the exemplification of the present invention.  
XX

XX Sequence 28 AA;

Query Match 13.5%; Score 14; DB 1; Length 28;

Best Local Similarity 66.7%; Pred. No. 1.8e+02;

Matches 2; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 36 GAP 38

Db 9 GSP 11

Search completed: August 3, 2005, 11:48:47  
Job time : 2 secs

**This Page Blank (uspto)**



Wed Aug 3 11:59:44 2005

GenCore version 5.1.6  
Copyright (c) 1993 - 2005 Compugen Ltd.

OM:protein - protein search, using sw model

Run on: August 3, 2005, 11:51:13 ; Search time 0.001 Seconds  
(without alignments)  
72.620 Million cell updates/sec

Title: us-10-726-967a-1  
Perfect score: 104  
Sequence: 1 TONGIRLPLRSGLGAPLGL 20

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 8 seqs, 3631 residues

Total number of hits satisfying chosen parameters: 8

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 500 summaries

Database : rnpdb:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	104	100.0	127	Q76KPO	Beta-site APP clea
2	104	100.0	501	BAE1_HUMAN	Beta-secretase 1 p
3	104	100.0	501	Q81YCG	Beta-site APP-clea
4	77	74.0	467	1 Q8C4F4	Mus musculus 0 day
5	77	74.0	501	1 BAE1_MOUSE	Beta-secretase 1 p
6	77	74.0	501	1 BAE1_RAT	Beta-secretase 1 p
7	77	74.0	501	1 Q8B0Y4	Mus musculus adult
8	41	39.4	532	1 Q9ULS1	KIAA1149 protein (

## ALIGNMENTS

RESULT 1  
Q76KPO PRELIMINARY: PRT, 127 AA.

AC Q76KPO: 05-JUL-2004 (TRENBLREL. 27, Created)  
DT 05-JUL-2004 (TRENBLREL. 27, Last sequence update)  
DT 05-JUL-2004 (TRENBLREL. 27, Last annotation update)  
DE Beta-site APP cleaving enzyme isoform I-127.  
GN Name=BACE;  
OS Homo sapiens (Human).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
OX NCBI\_TaxID=9606;  
RN [1]  
RP SEQUENCE FROM N.A.  
RA Tanahashi H.;  
RL Submitted (AUG-2002) to the EMBL/GenBank/DBJ databases.  
CC -1- SIMILARITY: Belongs to peptidase family A1.  
DR EMBL; AB089958; BAC81826.1; -  
DR HSSP; P00797; 1BBS.

DR GO:0009049; F:aspartic-type signal peptidase activity; IEA.  
DR GO:0006508; P:proteolysis and peptidolysis; IEA.  
DR InterPro: IPR001461; Peptidase A1.  
DR InterPro: IPR009119; Pept\_A1\_BACE.  
DR InterPro: IPR009120; Pept\_A1\_BACE.  
DR InterPro: IPR009007; Pept\_AspArtic.  
DR InterPro: IPR001969; Pept\_Asp\_AS.  
DR Pfam: PF00026; Asp\_1.  
DR PRINTS: PR01816; BACE1.  
DR PRINTS: PR01815; BACEFAMILY.  
DR PROSITE: PS00141; ASP\_PROTEASE; 1.  
DR Aspartyl protease; Hydrolase; Protease.  
KW SEQUENCE 127 AA; 13939 MW; C657354CBE72DC4 CRC64;

Query Match 100.0%; Score 104; DB 1; Length 127;  
Best Local Similarity 100.0%; Pred. No. 0.77;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGLGAPLGL 41  
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 2  
BAE1\_HUMAN STANDARD: PRT, 501 AA.  
ID P56817; Q9BYB9; Q9BYC0; Q9BYC1; Q9UTR5;  
AC 30-MAY-2000 (Rel. 39, Created)  
DT 30-MAY-2000 (Rel. 39, Last sequence update)  
DT 25-OCT-2004 (Rel. 45, Last annotation update)  
DE Beta-secretase 1 precursor (EC 3.4.23.46) (Beta-site APP cleaving enzyme 1) (Beta-site amyloid precursor protein cleaving enzyme 1)  
DE (Aspartyl protease 2) (Asp 2) (ASP2) (Membrane-associated aspartic protease 2) (Memapsin-2).  
GN Name=BACE1; Synonyms=BACE;  
OS Homo sapiens (Human).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
OX NCBI\_TaxID=9606;  
RN [1]  
RP SEQUENCE FROM N.A. (ISOFORM A).  
RC TISSUE=Brain;  
RX MEDLINE=20002972; PubMed=10531052; DOI=10.1126/science.286.5440.735;  
RA Vassar R., Bennett B.D., Babu-Khan S., Kahn S., Mendiaz E.A.,  
RA Denis P., Teplow D.B., Ross S., Amarante P., Loeloff R., Luo Y.,  
RA Fisher S., Fuller J., Bdeson S., Lile J., Jarosinski M.A.,  
RA Biese A.L., Curran E., Burgess T., Louis J.-C., Collins F.,  
RA Treanor J., Rogers G., Citron M.;  
RT "Beta-secretase cleavage of Alzheimer's amyloid precursor protein by the transmembrane aspartic protease BACE.";  
RL Science 286:735-741(1999).  
RN [2]  
RP SEQUENCE FROM N.A. (ISOFORM A), SEQUENCE OF 46-68, AND  
RP CHARACTERIZATION.  
RC TISSUE=Brain;  
RX MEDLINE=20051717; PubMed=10591214; DOI=10.1038/990114;  
RA Sinha S., Anderson J.P., Barbour R., Basi G.S., Caccavello R.,  
RA Davis D., Doan M., Doves H.F., Frigon N., Hong J., Jacobson-Croak K.,  
RA Jewett N., Keim P., Knops J., Lieberburg I., Power M., Tan H.,  
RA Tatsuno G., Tung J., Schenk D., Seubert P., Stuenkel S.M., Wang S.,  
RA Walker D., Zhao J., McConlogue L., Varghese J.;  
RT "Purification and cloning of amyloid precursor protein beta-secretase from human brain.";  
RL Nature 402:537-540(1999).  
RN [3]  
RP SEQUENCE FROM N.A. (ISOFORM A).  
RX MEDLINE=20057170; PubMed=10591213; DOI=10.1038/990107;  
RA Yan R., Bienkowska M.J., Shuck M.E., Miao H., Torry M.C., Pauley A.M.,  
RA Brashler J.R., Strietman N.C., Mathews W.R., Buhl A.E., Carter D.B.,  
RA Tomasecill A.G., Parodi L.A., Heinrichson R.L., Gunney M.B.,  
RT "Membrane-anchored aspartyl protease with Alzheimer's disease beta-secretase activity.";  
RL Nature 402:533-537(1999).

```

RN [4]
RP SEQUENCE FROM N.A. (ISOFORM A).
RX MEDLINE=20120043; PubMed=10656250; DOI=10.1006/mcne.1999.0811;
RA Hussain I., Powell D.J., Howlett D.R., Tew D.G., Meek T.D.,
RA Chapman C., Gloger I.S., Murphy K.E., Southan C.D., Ryan D.M.,
RA Smith T.S., Simons D.L., Walsh F.S., Dingwall C., Christie G.,
RT "Identification of a novel aspartic proteinase (Asp 2) as beta-
RT secretase.";
RL Mol. Cell. Neurosci. 14:419-427(1999).
RN [5]
RP SEQUENCE FROM N.A. (ISOFORM B).
RC TISSUE=Brain, and Pancreas;
RA Michel B., De Pietri Tonelli D., Zaccchetti D., Keller P.,
RT "New beta-site APP cleaving enzyme isoform (BACE-1b) obtained from
RT human brain and pancreas.";
RL Submitted (JAN-2001) to the EMBL/GenBank/DBJ databases.
RN [6]
RP SEQUENCE FROM N.A. (ISOFORM C).
RC TISSUE=Pancreas;
RA Zaccchetti D., De Pietri Tonelli D., Schnurbe R.,
RT "New beta-site APP cleaving enzyme isoform (BACE-1c) obtained from
RT human pancreas.";
RL Submitted (JAN-2001) to the EMBL/GenBank/DBJ databases.
RN [7]
RP SEQUENCE FROM N.A. (ISOFORMS B; C AND D).
RC TISSUE=Brain;
RX MEDLINE=21408467; PubMed=11516562; DOI=10.1016/S0304-3940(01)01912-7;
RA Tanahashi H., Tabira T.,
RT "Three novel alternatively spliced isoforms of the human beta-site
RT amyloid precursor protein cleaving enzyme (BACE) and their effect on
RT Neurosci. Lett. 307:9-12(2001).
RN [8]
RP SEQUENCE OF 14-501 FROM N.A. (ISOFORM A), AND CHARACTERIZATION.
RX MEDLINE=20144060; PubMed=10677483; DOI=10.1073/pnas.97.4.1456;
RA Lin X., Kogelsch G., Wu S., Downs D., Dashti A., Tang J.,
RT "Human aspartic protease memapsin 2 cleaves the beta-secretase site of
RT beta-amyloid precursor protein.";
RL Proc. Natl. Acad. Sci. U.S.A. 97:1456-1460(2000).
RN [9]
RP DISULFIDE BONDS.
RX MEDLINE=21950860; PubMed=11953458;
RA Fischer F., Molinari M., Bodendorf U., Paganetti P.,
RT "The disulphide bonds in the catalytic domain of BACE are critical but
RT not essential for amyloid precursor protein processing activity.";
RL J. Neurochem. 80:1079-1088(2002).
RN [10]
RP FUNCTION: Responsible for the proteolytic processing of the
RN amyloid precursor protein (APP). Cleaves at the amino terminus of
RN the A-beta peptide sequence, between residues 671 and 672 of APP,
RN leads to the generation and extracellular release of beta-cleaved
RN soluble APP, and a corresponding cell-associated carboxy-terminal
RN fragment which is later released by gamma-secretase.
RN [11]
RP CATALYTIC ACTIVITY: Broad endopeptidase specificity. Cleaves Glu-
RN Val-Asn-Leu-i-Asp-Ala-Glu-Phe in the Swedish variant of
RN Alzheimer's amyloid precursor protein.
RN [12]
RP SUBCELLULAR LOCATION: Type I membrane protein.
RN [13]
RP ALTERNATIVE PRODUCTS:
RN Event=Alternative splicing; Named Isoforms=4;
RN Name=A; Synonym=BACE-1a, BACE-501;
RN IsoId=P56817-1; Sequence=Displayed;
RN Name=B; Synonym=BACE-1b, BACE-I-476;
RN IsoId=P56817-2; Sequence=VSP_005223;
RN Name=C; Synonym=BACE-1c, BACE-I-457;
RN IsoId=P56817-3; Sequence=VSP_005222;
RN Name=D; Synonym=BACE-1d, BACE-I-432;
RN IsoId=P56817-4; Sequence=VSP_005222, VSP_005223;
RN [14]
RP TISSUE SPECIFICITY: Brain.
RN [15]
RP SIMILARITY: Belongs to the peptidase A1 family.
RN [16]
RP This SWISS-PROT entry is copyright. It is produced through a collaboration
RN between the Swiss Institute of Bioinformatics and the EMBL outstation -
RN the European Bioinformatics Institute. There are no restrictions on its
RN use by non-profit institutions as long as its content is in no way

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CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL; AF190725; AAF04142.1; -
DR EMBL; AF201468; AAF18982.1; -
DR EMBL; AF200343; AAF17079.1; -
DR EMBL; AF204943; AAF26357.1; -
DR EMBL; AF338816; AAK38374.1; -
DR EMBL; AF338817; AAK38375.1; -
DR EMBL; AB050436; AAK38375.1; -
DR EMBL; AB050437; BAB40932.1; -
DR EMBL; AB050438; BAB40933.1; -
DR EMBL; AF200193; AAF13715.1; -
DR PIR; A59090; A59090.
DR PDB; 1FKN; X-ray; A/B=56-446.
DR PDB; 1MAH; X-ray; A/B=56-446.
DR MEROPS; A01.004; -.
DR Genew; HGNC:933; BACE1.
DR H-InvDB; HIX0010165; -.
DR MIM; 604252; -.
DR GO; GO:0005687; C:integral to plasma membrane; TAS.
DR GO; GO:0008798; F:beta-aspartyl-peptidase activity; TAS.
DR GO; GO:0006508; F:proteolysis and peptidolysis; TAS.
DR InterPro; IPR009119; Pept_A1_BACE.
DR InterPro; IPR009120; Pept_A1_BACE.
DR InterPro; IPR001969; Pept_Asp_AS.
DR InterPro; IPR009007; Pept_AspArtic.
DR InterPro; IPR001461; Peptidase_A1.
DR Pfam; PF00026; Asp_1.
DR PRINTS; PRO1816; BACE1.
DR PRINTS; PRO1815; BACEFAMILY.
DR PROSITE; PS00792; PEPsin.
DR PROSITE; PS00141; Asp_PROTEASE; 1.
KM 3D-structure; Alternative splicing; Glycoprotein; Hydrolase; Signal;
KM Transmembrane; Zymogen.
FT FT STGNL 1 21 Potential.
FT FT PROPEP 22 45
FT FT CHAIN 46 501
FT FT DOMAIN 22 457
FT FT TRANSMEM 458 478
FT FT DOMAIN 479 501
FT FT ACT SITE 93 93
FT FT ACT SITE 289 289
FT FT DISULFID 216 420
FT FT DISULFID 278 443
FT FT CARBOHYD 330 380
FT FT CARBOHYD 153 153
FT FT CARBOHYD 172 172
FT FT CARBOHYD 172 172
FT FT CARBOHYD 223 223
FT FT CARBOHYD 354 354
FT FT VARSPPLIC 146 189
FT FT VARSPPLIC 190 214
FT FT VARSPPLIC 214 214
FT FT HELIX 61 63
FT FT TURN 64 65
FT FT STRAND 67 70
FT FT TURN 71 73
FT FT STRAND 74 81
FT FT TURN 82 85
FT FT STRAND 86 93
FT FT TURN 94 95
FT FT STRAND 99 102
FT FT TURN 107 108
FT FT HELIX 115 117
FT FT TURN 119 120
FT FT STRAND 122 131
FT FT STRAND 136 147
FT FT TURN 149 150
FT FT STRAND 155 167
FT FT TURN 172 173

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FT STRAND 178 181  
FT HELIX 185 187  
FT TURN 192 193  
FT HELIX 197 204  
FT STRAND 211 215  
FT HELIX 224 229

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 0.77;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSLGAGAPLGL 41  
Db 22 TONGIRLPLRSLGAGAPLGL 41

RESULT 3  
Q81YC8  
ID 081YC8 PRELIMINARY; PRT; 501 AA.  
AC 081YC8  
DT 01-MAR-2003 (TRENBLREL. 23, Created)  
DT 01-MAR-2003 (TRENBLREL. 23, Last sequence update)  
DT 01-MAR-2004 (TRENBLREL. 26, Last annotation update)  
DE Beta-site APP-cleaving enzyme 1, isoform A preproprotein.  
GN Name=BACE1;  
OS Homo sapiens (Human).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
OX NCBI\_TaxID=9606;  
RN [1]  
RP SEQUENCE FROM N.A.  
RC TISSUE=Brain;  
RX MEDLINE=22386257; PubMed=12477932; DOI=10.1073/pnas.242603899;  
RA Klausner R.L., Collins F.S., Wagner L., Shennan C.M., Schuler G.D.,  
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,  
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Schetz T.B.,  
RA Brownstein M.J., Uedlin T.B., Toshiyuki S., Carninci P., Prange C.,  
RA Rana S.S., Loguillano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,  
RA Boeck S.A., McGowan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,  
RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
RA Fahey J., Helton E., Kettelman M., Madan A., Rodriguez S., Sanchez A.,  
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,  
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Buterfield Y.S.,  
RA Krzyzanski M.I., Skalska U., Smallus D.E., Scherch A., Schein J.E.,  
RA Jones S.J., Maitra M.A.,  
RT "Generation and initial analysis of more than 15,000 full-length human  
RT and mouse cDNA sequences."  
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).  
RN [2]  
RP SEQUENCE FROM N.A.  
RC TISSUE=Brain;  
RA Strausberg R.,  
RL Submitted (JUL-2002) to the EMBL/GenBank/DBJ databases.  
CC -1- SIMILARITY: Belongs to peptidase family A1.  
DR EMBL: BC036084; AAH36084.1; -.  
DR HSSP: P56817; 1PKN.  
DR GO: GO:0005756; C:cytosol; ISS.  
DR GO: GO:0005794; C:Golgi apparatus; ISS.  
DR GO: GO:0016021; C:integral to membrane; ISS.  
DR GO: GO:0004190; F:aspartic-type endopeptidase activity; ISS.  
DR GO: GO:0050455; P:beta-amyloid metabolism; ISS.  
DR GO: GO:0006509; P:membrane protein ectodomain proteolysis; ISS.  
DR InterPro: IPR001461; Peptidase A1.  
DR InterPro: IPR009119; Pept\_A1\_BACE.  
DR InterPro: IPR009120; Pept\_A1\_BACE1.  
DR InterPro: IPR009007; Pept\_Aspartic.  
DR InterPro: IPR001969; Pept\_Asp\_AS.  
DR PRINTS: PR01816; BACE1.

DR PRINTS: PR01815; BACEFAMILY.  
DR PRINTS: PR00792; PERSIN.  
DR PROSITE: PS00141; ASP\_PROTEASE; 1.  
DR Aspartyl protease; Hydrolase; Protease.  
SQ SEQUENCE 501 AA; 55823 MW; 768595CF5517EFB7 CRC64;

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 0.77;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSLGAGAPLGL 41  
Db 22 TONGIRLPLRSLGAGAPLGL 41

RESULT 4  
Q8CAF4  
ID 08CAF4 PRELIMINARY; PRT; 467 AA.  
AC 08CAF4  
DT 01-MAR-2003 (TRENBLREL. 23, Created)  
DT 01-MAR-2003 (TRENBLREL. 23, Last sequence update)  
DT 01-MAR-2004 (TRENBLREL. 26, Last annotation update)  
DE Mus musculus 0 day neonate cerebellum cDNA, RIKEN full-length enriched  
DE library, clone: C230037B16 product: beta-site APP cleaving enzyme, full  
DE insert sequence.  
GN Name=Bace1; Synonyms=Bace;  
OS Mus musculus (Mouse).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.  
OX NCBI\_TaxID=10090;  
RN [1]  
RP SEQUENCE FROM N.A.  
RC STRAIN=C57BL/6J; TISSUE=Cerebellum;  
RX MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;  
RA Carninci P., Hayashizaki Y.,  
RL "High-efficiency full-length cDNA cloning."  
RN [2]  
RP SEQUENCE FROM N.A.  
RC STRAIN=C57BL/6J; TISSUE=Cerebellum;  
RX MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;  
RA RIKEN FANTOM Consortium;  
RL "Functional annotation of a full-length mouse cDNA collection."  
RN [3]  
RP SEQUENCE FROM N.A.  
RC STRAIN=C57BL/6J; TISSUE=Cerebellum;  
RA The FANTOM Consortium,  
RL the RIKEN Genome Exploration Research Group Phase I & II Team;  
RT "Analysis of the mouse transcriptome based on functional annotation of  
RT 60,770 full-length cDNAs."  
RL Nature 420:563-573(2002).  
RN [4]  
RP SEQUENCE FROM N.A.  
RC STRAIN=C57BL/6J; TISSUE=Cerebellum;  
RX MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;  
RA Carninci P., Shibata Y., Hayatsu N., Suganara Y., Shibata K., Itoh M.,  
RA Kono H., Okazaki Y., Muramatsu M., Hayashizaki Y.,  
RT "Normalization and subfractionation of cap-trapper-selected cDNAs to  
RT prepare full-length cDNA libraries for rapid discovery of new genes."  
RL Genome Res. 10:1617-1630(2000).  
RN [5]  
RP SEQUENCE FROM N.A.  
RC STRAIN=C57BL/6J; TISSUE=Cerebellum;  
RX MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;  
RA Shibata K., Itoh M., Azawa K., Nagao S., Sasaki N., Carninci P.,  
RA Kono H., Akiyama J., Nishi K., Kitamura T., Tashiro H., Itoh M.,  
RA Suni N., Ishii Y., Nakamura S., Hazama M., Nishino T., Harada A.,  
RA Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,  
RA Fujiwaka S., Inoue K., Togawa Y., Izawa M., Ohara E., Wataniki M.,  
RA Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsura S., Kawai J.,  
RA Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.,  
RT "RIKEN integrated sequence analysis (RISA) system-384-format

RT sequencing pipeline with 384 multicapillary sequencer.",  
 RL Genome Res. 10:1757-1771 (2000).  
 RN [6]  
 RP SEQUENCE FROM N.A.  
 RC STRAIN=C57BL/6J; TISSUE=Cerebellum;  
 RA Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carinici P.,  
 RA Fukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W.,  
 RA Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T.,  
 RA Hori F., Imocani K., Ichii Y., Itoh M., Kagawa I., Kasukawa T.,  
 RA Kato H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,  
 RA Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,  
 RA Nihi K., Nomura K., Numazaki R., Ohno M., Ohnato N., Okazaki Y.,  
 RA Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,  
 RA Tagawa A., Takahashi F., Takagawa A., Shiraki T., Sogabe Y., Tagami M.,  
 RA Tomaru A., Taya T., Yasunishi A., Muramatsu M., Hayashizaki Y.,  
 RL Submitted (APR-2002) to the EMBL/GenBank/DBJ databases.  
 CC 1- SMILARITY: Belongs to peptidase family A1.  
 DR EMBL; AK082317; BAC38462.1; -  
 DR HSSP; P56817; 1PKN.  
 DR MD; MGI:1346542; Bace1.  
 DR GO; GO:0005768; C:cytosol; ISS.  
 DR GO; GO:0005615; C:extracellular space; TAS.  
 DR GO; GO:0005794; C:Golgi apparatus; ISS.  
 DR GO; GO:0016021; C:integral to membrane; ISS.  
 DR GO; GO:0004190; F:aspartic-type endopeptidase activity; ISS.  
 DR GO; GO:0005035; F:beta-amyloid metabolism; ISS.  
 DR GO; GO:0006509; P:membrane protein ectodomain proteolysis; ISS.  
 DR InterPro: IPR001461; Peptidase A1.  
 DR InterPro: IPR009119; Pept\_A1\_BACE.  
 DR InterPro: IPR009120; Pept\_A1\_BACE.  
 DR InterPro: IPR009007; Pept\_Aspartic.  
 DR InterPro: IPR001969; Pept\_Asp\_AS.  
 DR PRINTS; PRO1816; BACE1.  
 DR PRINTS; PRO1815; BACEFAMILY.  
 DR PROSITE; PS00141; ASP\_PROTEASE; 1.  
 DR Aspartyl protease; Hydrolase; Protease.  
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 Query Match 74.0%; Score 77; DB 1; Length 467;  
 Best Local Similarity 80.0%; Pred. No. 5.6;  
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 QY 22 TQHGRLPRLSGAGAPLGL 41  
 DB 22 THLGRLPRLSGAGAPLGL 41  
 RESULT 5  
 BAE1 MOUSE STANDARD; PRT; 501 AA.  
 ID BAE1 MOUSE  
 AC P56818;  
 DT 30-MAY-2000 (Rel. 39, Created)  
 DT 16-OCT-2001 (Rel. 40, Last sequence update)  
 DT 25-OCT-2004 (Rel. 45, Last annotation update)  
 DE Bace1-secretaase 1 precursor (EC 3.4.23.46) (Beta-site APP cleaving  
 DE enzyme 1) (Beta-site amyloid precursor protein cleaving enzyme 1)  
 DE (Aspartyl protease 2) (Asp 2) (ASPP2) (Membrane-associated aspartic  
 DE protease 2) (Memapsin-2).  
 DN Name=Bace1; Synonyms=Bace;  
 OS Mus musculus (Mouse).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.  
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 RX [1]  
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 RC MEDLINE=20002972; PubMed=10531052; DOI=10.1126/science.286.5440.735;  
 RA Vassar R., Bennett B.D., Babu-Khan S., Kahn S., Mendiaz B.A.,  
 RA Denis P., Teplow D.B., Ross S., Amarante P., Loebner R., Luo Y.,  
 RA Fisher S., Fuller J., Edwards S., Lile J., Joshi N., Luo Y.,  
 RA Biere A.L., Curran E., Burgess T., Louis J.-C., Collins F.,  
 RA Treanor J., Rogers G., Citron M.;

RT "Beta-secretase cleavage of Alzheimer's amyloid precursor protein by  
 RT the transmembrane aspartic protease BACE.",  
 RL Science 286:735-741(1999).  
 RN [2]  
 RP REVIEWS TO 6 AND 81-87.  
 RA Bennett B.D., Vassar R., Citron M.,  
 RL Submitted (JAN-2000) to the EMBL/GenBank/DBJ databases.  
 RN [3]  
 RP SEQUENCE FROM N.A.  
 RC MEDLINE=20057170; PubMed=10591213; DOI=10.1038/990107;  
 RA Yan R., Bien-Lyong M.J., Shuck M.E., Mao H., Tori M.C., Pauley A.M.,  
 RA Braheir J.R., Strachan N.C., Mathews W.R., Buhl A.E., Carter D.B.,  
 RA Tomaseelli A.G., Parodi L.A., Heinrichson R.L., Gurney M.E.,  
 RT "Membrane-anchored aspartyl protease with Alzheimer's disease beta-  
 RT secretase activity.",  
 RL Nature 402:533-537(1999).  
 RN [4]  
 RP SEQUENCE FROM N.A.  
 RC STRAIN=C57BL/6J; TISSUE=Heart;  
 RA MEDLINE=22354683; PubMed=12466851; DOI=10.1038/nature01266;  
 RA Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,  
 RA Nikaide I., Osato N., Saito R., Suzuki H., Yamana H., Kiyosawa H.,  
 RA Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gotohori T.,  
 RA Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,  
 RA Schirral L.M., Kanpin A., Matsuda H., Batalov S., Beisel K.W.,  
 RA Blake J.A., Brad D., Brusic V., Choithia C., Corbani L.E., Cousins S.,  
 RA Dalla E., Dragani T.A., Fletcher C.F., Forrest A., Fraser K.S.,  
 RA Gaasterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,  
 RA Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis E.D.,  
 RA Kanai A., Kawai H., Kawasawa Y., Kedierski R.M., King B.L.,  
 RA Konagaya A., Kurochkin I.V., Lee Y., Lemard B., Lyons P.A.,  
 RA Maglott D.R., Malcais L., Marchionni L., McKenzie L., Miki H.,  
 RA Nagashima T., Numata K., Okido T., Pavan W.J., Petrea G., Pesole G.,  
 RA Petrovsky N., Pillai R., Pontius J.U., Qi D., Ramchandran S.,  
 RA Ravasi T., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,  
 RA Sandelin A., Schneider C., Sempke C.A., Secou M., Shimada K.,  
 RA Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,  
 RA Verardo R., Wagner M., Wahlestedt C., Wang Y., Watanabe Y., Wells C.,  
 RA Wilming L.G., Wymshar-Boris A., Yanagisawa M., Yang I., Yang L.,  
 RA Yuan Z., Zavalan M., Zhu Y., Zimmer A., Carinici P., Hayatsu N.,  
 RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,  
 RA Shiraki T., Waki K., Kawai J., Aizawa K., Arakawa T., Fukuda S.,  
 RA Hara A., Hashizume W., Imocani K., Ichii Y., Itoh M., Kagawa I.,  
 RA Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,  
 RA Yasunishi A., Yoshino M., Waterston R., Lander E.S., Rogers J.,  
 RA Birney E., Hayashizaki Y.,  
 RT "Analysis of the mouse transcriptome based on functional annotation of  
 RT 60,770 full-length cDNAs.",  
 RL Nature 420:563-573(2002).  
 RN [5]  
 RP SEQUENCE FROM N.A.  
 RC STRAIN=C57BL/6; TISSUE=Brain;  
 RA MEDLINE=22386257; PubMed=12477932; DOI=10.1073/pnas.242603899;  
 RA Straube R.L., Feingold E.A., Grouse L.H., Derge J.G.,  
 RA Klausner R.D., Collins F.S., Wagner L., Sherman C.M., Schuler G.D.,  
 RA Altschuler S.F., Zeeberg B., Buelow K.H., Schaefer C.F., Bhat N.K.,  
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heich F.,  
 RA Diachenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Schetz T.E.,  
 RA Brownstein M.J., Ueslin T.B., Toshiyuki S., Carinici P., Prange S.,  
 RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,  
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,  
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
 RA Fahy J., Heltan E., Kettman M., Madan A., Rodriguez S., Sanchez A.,  
 RA Blakeley R.W., Madan A., Young A.C., Shcherchenko Y., Bouffard G.G.,  
 RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,  
 RA Butcherfield Y.S.N., Krzywinski M.I., Skalka U., Smalls D.E.,  
 RA Schercher A., Schein J.E., Jones S.J.M., Marra M.A.,  
 RT "Generation and initial analysis of more than 15,000 full-length human  
 RT and mouse cDNA sequences",  
 Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).

CC -1- FUNCTION: Responsible for the proteolytic processing of the  
 CC amyloid precursor protein (APP). Cleaves at the amino terminus of  
 CC the A-beta peptide sequence, between residues 671 and 672 of APP,  
 CC leads to the generation and extracellular release of beta-cleaved  
 CC soluble APP, and a corresponding cell-associated carboxy-terminal  
 CC fragment which is later released by gamma-secretase (By  
 CC similarity).

CC -1- CATALYTIC ACTIVITY: Broad endopeptidase specificity. Cleaves Glu-  
 CC Val-Aen-Leu-|-Asp-Ala-Glu-Phe in the Swedish variant of  
 CC Alzheimer's amyloid precursor protein.

CC -1- SUBCELLULAR LOCATION: Type I membrane protein.

CC -1- TISSUE SPECIFICITY: Brain.

CC -1- SIMILARITY: Belongs to the peptidase A1 family.

CC -----

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CC -----

DR EMBL; AF190726; AAF04143.2; -;  
 DR EMBL; AF200346; AAP17082.1; -;  
 DR EMBL; AK014464; BAB29370.1; -;  
 DR EMBL; BC048189; AAH48189.1; -;  
 DR HSSP; P56817; IM4H.  
 DR MEROPS; A01.004; -;  
 DR MGD; MGI.1346542; Bace1.  
 DR InterPro; IPR009119; Pept\_A1\_BACE.  
 DR InterPro; IPR009120; Pept\_A1\_BACE1.  
 DR InterPro; IPR001969; Pept\_Asp\_AS.  
 DR InterPro; IPR009007; Pept\_AspArtic.  
 DR InterPro; IPR001461; Peptidase\_A1.  
 DR Pfam; PF00026; Asp\_1.  
 DR PRINTS; PRO1816; BACE1.  
 DR PRINTS; PRO1815; BACEFAMILY.  
 DR PRINTS; PRO0792; PERSIN.  
 DR PROSITE; PS00141; ASP\_PROTEASE; 1.  
 DR Aspartyl protease; Glycoprotein; Hydrolyase; Signal; Transmembrane;  
 KM Zymogen.

FT SIGNAL 1 21 Potential.  
 FT PROPEP 22 45 Potential.  
 FT CHAIN 46 501 Beta-secretase 1.  
 FT DOMAIN 22 457 Extracellular (Potential).  
 FT TRANSMEM 458 478 Potential.  
 FT DOMAIN 479 501 Cytoplasmic (Potential).  
 FT ACT\_SITE 93 93 By similarity.  
 FT ACT\_SITE 289 289 By similarity.  
 FT DISULFID 216 420 By similarity.  
 FT DISULFID 278 443 By similarity.  
 FT DISULFID 330 380 By similarity.  
 FT CARBOHYD 153 153 N-linked (GlcNAc... ) (Potential).  
 FT CARBOHYD 172 172 N-linked (GlcNAc... ) (Potential).  
 FT CARBOHYD 223 223 N-linked (GlcNAc... ) (Potential).  
 FT CARBOHYD 354 354 N-linked (GlcNAc... ) (Potential).  
 SQ SEQUENCE 501 AA; 55747 MW; C085A0131458474E CRC64;

Query Match 74.0%; Score 77; DB 1; Length 501;  
 Best Local Similarity 80.0%; Pred. No. 5.6;  
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

OY 22 TONGIRLPNSGLGAPLGL 41  
 DB 22 THLGIRLPNSGLGAPLGL 41

RESULT 6  
 ID\_BAEL\_RAT STANDARD; PRT; 501 AA.  
 AC P56819;  
 DT 30-MAY-2000 (Rel. 39, Created)  
 DT 30-MAY-2000 (Rel. 39, Last sequence update)

DT 25-OCT-2004 (Rel. 45, Last annotation update)  
 DE Beta-secretase 1 precursor (EC 3.4.23.46) (Beta-site APP cleaving  
 DE enzyme 1) (Beta-site amyloid precursor protein cleaving enzyme 1)  
 DE (Aspartyl protease 2) (Asp 2) (ASP2) (Membrane-associated aspartic  
 DE protease 2) (Memapsin-2).  
 GN Name=Bace1; Synonyms=Bace;  
 OS Eukarya; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 CC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.  
 CC NCBI\_TaxId=10116;  
 RN [1]  
 RP MEDLINE=20002972; PubMed=10531052; DOI=10.1126/science.286.5440.735;  
 RA Vassar R., Bennett B.D., Babu-Khan S., Kahn S., Mendiaz E.A.,  
 RA Denis P., Teplow D.B., Rose S., Amaratne P., Loeloff R., Luo Y.,  
 RA Fisher S., Fuller J., Edenson S., Lile J., Jarosinski M.A.,  
 RA Biere A.L., Curran E., Burgess T., Louis J.-C., Collins F.,  
 RA Treanor J., Rogers G., Citron M.,  
 RT "Beta-secretase cleavage of Alzheimer's amyloid precursor protein by  
 RT the transmembrane aspartic protease BACE.";  
 RL Science 286:735-741(1999).

CC -1- FUNCTION: Responsible for the proteolytic processing of the  
 CC amyloid precursor protein (APP). Cleaves at the amino terminus of  
 CC the A-beta peptide sequence, between residues 671 and 672 of APP,  
 CC leads to the generation and extracellular release of beta-cleaved  
 CC soluble APP, and a corresponding cell-associated carboxy-terminal  
 CC fragment which is later released by gamma-secretase (By  
 CC similarity).

CC -1- CATALYTIC ACTIVITY: Broad endopeptidase specificity. Cleaves Glu-  
 CC Val-Aen-Leu-|-Asp-Ala-Glu-Phe in the Swedish variant of  
 CC Alzheimer's amyloid precursor protein.

CC -1- SUBCELLULAR LOCATION: Type I membrane protein.

CC -1- SIMILARITY: Belongs to the peptidase A1 family.

CC -----

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CC -----

DR EMBL; AF190727; AAF04144.1; -;  
 DR HSSP; P56817; IM4H.  
 DR MEROPS; A01.004; -;  
 DR RGD; 2191; Bace.  
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 DR InterPro; IPR009120; Pept\_A1\_BACE1.  
 DR InterPro; IPR001969; Pept\_Asp\_AS.  
 DR InterPro; IPR009007; Pept\_AspArtic.  
 DR InterPro; IPR001461; Peptidase\_A1.  
 DR Pfam; PF00026; Asp\_1.  
 DR PRINTS; PRO1816; BACE1.  
 DR PRINTS; PRO1815; BACEFAMILY.  
 DR PRINTS; PRO0792; PERSIN.  
 DR PROSITE; PS00141; ASP\_PROTEASE; 1.  
 DR Aspartyl protease; Glycoprotein; Hydrolyase; Signal; Transmembrane;  
 KM Zymogen.

FT SIGNAL 1 21 Potential.  
 FT PROPEP 22 45 Potential.  
 FT CHAIN 46 501 Beta-secretase 1.  
 FT DOMAIN 22 457 Extracellular (Potential).  
 FT TRANSMEM 458 478 Potential.  
 FT DOMAIN 479 501 Cytoplasmic (Potential).  
 FT ACT\_SITE 93 93 By similarity.  
 FT ACT\_SITE 289 289 By similarity.  
 FT DISULFID 216 420 By similarity.  
 FT DISULFID 278 443 By similarity.  
 FT DISULFID 330 380 By similarity.  
 FT CARBOHYD 153 153 N-linked (GlcNAc... ) (Potential).  
 FT CARBOHYD 172 172 N-linked (GlcNAc... ) (Potential).  
 FT CARBOHYD 223 223 N-linked (GlcNAc... ) (Potential).  
 FT CARBOHYD 354 354 N-linked (GlcNAc... ) (Potential).

SQ SEQUENCE 501 AA; 55806 MW; 24B445BC8B8E7DE3 CRC64;  
 Query Match 74.0%; Score 77; DB 1; Length 501;  
 Best Local Similarity 80.0%; Pred. No. 5.6;  
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGLAGAPLGL 41  
 Db 22 THLGIRLPLRSGLAGAPLGL 41

RESULT 7  
 Q8BOY4 PRELIMINARY; PRT; 501 AA.  
 ID Q8BOY4  
 AC Q8BOY4; 01-MAR-2003 (TREMBLrel. 23, Created)  
 DT 01-MAR-2003 (TREMBLrel. 23, Last sequence update)  
 DT 01-MAR-2004 (TREMBLrel. 26, Last annotation update)  
 DE Mus musculus adult male corpora quadrigemina cDNA, RIKEN full-length  
 DE enriched library, clone:B230346M13 product:beta-site APP cleaving  
 DE enzyme, full insert sequence.  
 GN Name=Bace1; Synonym=Bace;  
 OS Mus musculus (Mouse).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.  
 OX NCBI\_TaxID=10090;  
 RN  
 RP SEQUENCE FROM N.A.  
 RC STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina;  
 RX MEDLINE=2085660; PubMed=11217851; DOI=10.1038/35055500;  
 RA RIKEN PANTOM Consortium;  
 RT "Functional annotation of a full-length mouse CDNA collection."  
 RL Nature 409:685-690(2001).  
 RN [3]  
 RP SEQUENCE FROM N.A.  
 RC STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina;  
 RA The PANTOM Consortium,  
 RA the RIKEN Genome Exploration Research Group Phase I & II Team;  
 RT "Analysis of the mouse transcriptome based on functional annotation of  
 RT 60,770 full-length cDNAs."  
 RL Nature 420:563-573(2002).  
 RN [4]  
 RP SEQUENCE FROM N.A.  
 RC STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina;  
 RX MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;  
 RA Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,  
 RA Kono H., Okazaki Y., Muratsu M., Hayashizaki Y.;  
 RA "Normalization and subtractions of cap-trapper-selected cDNAs to  
 RT prepare full-length cDNA libraries for rapid discovery of new genes."  
 RL Genome Res. 10:1617-1630(2000).  
 RN [5]  
 RP SEQUENCE FROM N.A.  
 RC STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina;  
 RX MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;  
 RA Shibata K., Itoh M., Aizawa K., Kitsuoka S., Sasaki N., Carninci P.,  
 RA Kono H., Akiyama Y., Nishi K., Kitsuoka T., Teshiro H., Itoh M.,  
 RA Suni N., Ishii Y., Nakamura S., Hazama M., Nishino T., Harada A.,  
 RA Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,  
 RA Fujiwara S., Inoue K., Togawa Y., Izawa M., Ohara E., Watanabe K.,  
 RA Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsura S., Kawai J.,  
 RA Okazaki Y., Muratsu M., Inoue Y., Kira A., Hayashizaki Y.;  
 RA "RIKEN integrated sequence analysis (RISA) system-384-format  
 RT sequencing pipeline with 384 multicapillary sequencer."  
 RL Genome Res. 10:1757-1771(2000).  
 RN [6]  
 RP SEQUENCE FROM N.A.

RC STRAIN=C57BL/6J; TISSUE=Corpora quadrigemina;  
 RA Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,  
 RA Fukuda S., Furuno M., Hamagaki T., Hara A., Hashizume W.,  
 RA Hayashida K., Hayatsu N., Hiramoto K., Hirooka T., Hirozane T.,  
 RA Horii F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,  
 RA Katoh H., Kawai J., Kojima Y., Kondo S., Kono H., Kouda M., Koya S.,  
 RA Kuribara C., Matsuyama T., Miyazaki A., Muratsu M., Nakamura M.,  
 RA Nishi K., Nomura K., Numazaki R., Ohno M., Ohnaka N., Okazaki Y.,  
 RA Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,  
 RA Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,  
 RA Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,  
 RA Tomaru A., Toya T., Yasunishi A., Muratsu M., Hayashizaki Y.;  
 RL Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.  
 CC -1- SIMILARITY: Belongs to peptidase family A1.  
 DR EMBL, AK046175; BAC32620.1; -.  
 DR HSSP, P56817; 1PKN.  
 DR MGD, MGI:1346542; Bace1.  
 DR GO, GO:0005768; C:endosome; ISS.  
 DR GO, GO:0005615; C:extracellular space; TAS.  
 DR GO, GO:0005794; C:Golgi apparatus; ISS.  
 DR GO, GO:0016021; C:integral to membrane; ISS.  
 DR GO, GO:0004190; F:aspartic-type endopeptidase activity; ISS.  
 DR GO, GO:0050435; F:beta-amyloid metabolism; ISS.  
 DR GO, GO:0006509; P:membrane protein ectodomain proteolysis; ISS.  
 DR InterPro: IPR001461; Peptidase A1.  
 DR InterPro: IPR009119; Pept\_A1\_BACE1.  
 DR InterPro: IPR009120; Pept\_A1\_BACE1.  
 DR InterPro: IPR009007; Pept\_AspArtic.  
 DR InterPro: IPR001969; Pept\_Asp\_AS.  
 DR PRINTS: PRO1815; BACEFAMILY.  
 DR PRINTS: PRO0792; PEPsin.  
 DR PROSITE, PS00141; ASP\_PROTEASE; 1.  
 DR Aspartyl protease; Hydrolase; Protease.  
 KW SEQUENCE 501 AA; 55816 MW; C0855513145E024E CRC64;  
 SQ SEQUENCE 501 AA; 55816 MW; C0855513145E024E CRC64;  
 Query Match 74.0%; Score 77; DB 1; Length 501;  
 Best Local Similarity 80.0%; Pred. No. 5.6;  
 Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGLAGAPLGL 41  
 Db 22 THLGIRLPLRSGLAGAPLGL 41

RESULT 8  
 Q9ULS1 PRELIMINARY; PRT; 532 AA.  
 ID Q9ULS1  
 AC Q9ULS1; 01-MAY-2000 (TREMBLrel. 13, Created)  
 DT 01-OCT-2001 (TREMBLrel. 18, Last sequence update)  
 DT 01-MAR-2004 (TREMBLrel. 26, Last annotation update)  
 DE KIAA1149 protein (Fragment).  
 GN Name=KIAA1149;  
 OS Homo sapiens (Human).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.  
 OX NCBI\_TaxID=9606;  
 RN [1]  
 RP SEQUENCE FROM N.A.  
 RC TISSUE=Brain;  
 RX MEDLINE=20039618; PubMed=10574461;  
 RA Hirosewa M., Nagase T., Ishikawa K., Kikuno R., Nomura N., Ohara O.;  
 RT "Characterization of cDNA clones selected by the Genemark analysis  
 RT from 812e-fractionated cDNA libraries from human brain."  
 RL DNA Res. 6:329-336(1999).  
 CC -1- SIMILARITY: Belongs to peptidase family A1.  
 DR EMBL, AB032975; BAA6463.2; -.  
 DR HSSP, P56817; 1PKN.  
 DR GO, GO:0005768; C:endosome; ISS.  
 DR GO, GO:0005794; C:Golgi apparatus; ISS.  
 DR GO, GO:0016021; C:integral to membrane; ISS.  
 DR GO, GO:0004190; F:aspartic-type endopeptidase activity; ISS.

DR GO: GO:0050435; P:beta-amyloid metabolism; ISS.  
DR GO: GO:0006509; P:membrane protein ectodomain proteolysis; ISS.  
DR InterPro; IPR001461; Peptidase\_A1.  
DR InterPro; IPR009119; Pept\_A1\_BACE.  
DR InterPro; IPR009120; Pept\_A1\_BACE1.  
DR InterPro; IPR009007; Pept\_Aspartic.  
DR InterPro; IPR001969; Pept\_Asp\_AS.  
DR PRINTS; PRO1816; BACE1.  
DR PRINTS; PRO1815; BACEFAMILY.  
DR PRINTS; PRO0792; PEPsin.  
DR PROSITE; PS00141; ASP\_PROTEASE; 1.  
KW Aspartyl protease; Hydrolase; Protease.  
FT NON\_TER 1  
SQ SEQUENCE 532 AA; 58720 MW; 98B135D0D5FBD2E8 CRC64;  
  
Query Match 39.4%; Score 41; DB 1; Length 532;  
Best Local Similarity 61.5%; Pred. No. 7;  
Matches 8; Conservative 1; Mismatches 4; Indels 0; Gaps 0;  
  
QY 29 PLRSGLGAPLGL 41  
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Db 60 PCAAWGGAPLGL 72

Search completed: August 3, 2005, 11:51:13  
Job time : 0.001 secs

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OM protein - protein search, using sw model

Run on: August 3, 2005, 11:50:41 ; Search time 0.001 Seconds  
(without alignments)  
10.020 Million cell updates/sec

Title: us-10-726-967a-1  
Perfect score: 104  
Sequence: 1 TQHGIRLPLRSGLGAPLGL 20

Scoring table: BIOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 1 seqs, 501 residues

Total number of hits satisfying chosen parameters: 1

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 500 summaries

Database : rprdb:\*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length DB	ID	Description
1	104	100.0	501	1	A59090

#### ALIGNMENTS

RESULT 1  
A59090

aspartic proteinase (BC 3.4.23.-) BACE precursor - human  
N/Alternate names: beta-secretase; beta-site APP cleaving enzyme  
C/Species: Homo sapiens (man)  
C/Date: 29-Oct-1999 #sequence\_revision 29-Oct-1999 #text\_change 09-Jul-2004  
C/Accession: A59090  
R/Vassar, R.; Bennett, B.D.; Babu-Khan, S.; Kahn, S.; Mendiaz, E.A.; Denis, P.; Teplow, M.A.; Biere, A.L.; Curran, E.; Burgess, T.; Louis, J.C.; Collins, F.; Treanor, J.; Roger Science 286, 735-741, 1999  
A/Title: beta-Secretase Cleavage of Alzheimer's amyloid precursor protein by the transmembrane Science 286, 735-741, 1999  
A/Reference number: A59090; MUID:20002972; PMID:10531052  
A/Note: submitted to Genbank, September 1999  
A/Accession: A59090  
A/Status: not compared with conceptual translation  
A/Molecule type: mRNA  
A/Residues: 1-501 <VAS>  
A/Cross-references: UNIPROT:P56817; GB:AF190725; NID:G6118538; PIDN:AAF04142.1; PID:G611  
C/Genetics:  
A/Gene: BACE  
C/Superfamily: beta-secretase  
C/Keywords: Alzheimer's disease; aspartic proteinase; brain; glycoprotein; hydrolase; pr  
F/1-21/Domain: signal sequence #status predicted <SIG>  
F/22-45/Domain: propeptide #status predicted <PRO>  
F/46-501/Product: acid proteinase BACE #status predicted <MAT>  
F/461-477/Domain: transmembrane #status predicted <TRN>

F/93,289/Active site: Asp #status predicted  
F/153,172,223,354/Binding site: carbohydrate (Aan) (covalent) #status predicted  
F/330-380/Disulfide bonds: #status predicted

Query Match 22 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPLRSGLGAPLGL 41  
Db 22 TQHGIRLPLRSGLGAPLGL 41

Search completed: August 3, 2005, 11:50:41  
Job time : 0.001 secs

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**This Page Blank (uspto)**

GenCore version 5.1.6  
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## OM protein - protein search, using sw model

Run on: August 3, 2005, 11:49:30 ; Search time 1 Seconds

(without alignments)  
1.716 Million cell updates/sec

Title: ue-10-726-967a-1

Sequence: 1 TQHGIRPLRSLGGLGAPLGL 20

Scoring table: BLOSUM62

Gap 10.0 , Gapext 0.5

Searched: 189 seqs, 85797 residues

Total number of hits satisfying chosen parameters: 189

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Listing first 500 summaries

Database : raidb:\*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	104	100.0	419	1	US-09-724-566A-57
2	104	100.0	419	1	US-09-471-669A-57
3	104	100.0	420	1	US-09-724-566A-60
4	104	100.0	420	1	US-09-471-669A-60
5	104	100.0	428	1	US-09-548-372D-51
6	104	100.0	428	1	US-09-548-372D-51
7	104	100.0	428	1	US-09-551-853D-51
8	104	100.0	428	1	US-09-416-901B-51
9	104	100.0	428	1	US-09-548-372D-51
10	104	100.0	428	1	US-09-794-927A-51
11	104	100.0	428	1	US-09-548-372D-51
12	104	100.0	428	1	US-09-795-847B-51
13	104	100.0	428	1	US-09-869-414-51
14	104	100.0	428	1	US-09-548-366F-51
15	104	100.0	428	1	US-09-548-368D-51
16	104	100.0	428	1	US-09-794-925A-51
17	104	100.0	431	1	US-09-724-566A-74
18	104	100.0	431	1	US-09-471-669A-74
19	104	100.0	433	1	US-09-548-372D-26
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21	104	100.0	433	1	US-09-551-853D-26
22	104	100.0	433	1	US-09-416-901B-26
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25	104	100.0	433	1	US-09-548-367D-26
26	104	100.0	433	1	US-09-795-847B-26
27	104	100.0	433	1	US-09-869-414-26
28	104	100.0	433	1	US-09-548-366F-26
29	104	100.0	433	1	US-09-548-368D-26
30	104	100.0	433	1	US-09-794-925A-26
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34	104	100.0	434	1	US-09-551-853D-53	Sequence 53, Appl
35	104	100.0	434	1	US-09-416-901B-53	Sequence 53, Appl
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105	104	100.0	476	1	US-09-795-847B-6	Sequence 6, Appl
106	104	100.0	476	1	US-09-869-414-6	Sequence 6, Appl



APPLICANT: Wang, Shuwen  
APPLICANT: McConlogue, Lisa  
TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS  
FILE REFERENCE: 015270-006430US  
CURRENT APPLICATION NUMBER: US/09/471,669A  
CURRENT FILING DATE: 1999-12-24  
PRIOR APPLICATION NUMBER: US 60/114,408  
PRIOR FILING DATE: 1998-12-31  
PRIOR APPLICATION NUMBER: US 60/119,571  
PRIOR FILING DATE: 1999-02-10  
PRIOR APPLICATION NUMBER: US 60/139,172  
PRIOR FILING DATE: 1999-06-15  
NUMBER OF SEQ ID NOS: 108  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 57  
LENGTH: 419  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-471-669A-57

Query Match 100.0%; Score 104; DB 1; Length 419;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPVGL 41  
DB 22 TONGIRLPLRSGLGAPVGL 41

RESULT 3  
US-09-724-566A-60  
Sequence 60, Application US/09724566A  
Patent No. 6627739  
GENERAL INFORMATION:  
APPLICANT: Anderson, John P.  
APPLICANT: Baqi, Guribbal  
APPLICANT: Doane, Minh Tam  
APPLICANT: Frigon, No. 6627739mand  
APPLICANT: John, Varghese  
APPLICANT: Power, Michael  
APPLICANT: Sinha, Sukanto  
APPLICANT: Tatsuno, Gwen  
APPLICANT: Tung, Jay  
APPLICANT: Wang, Shuwen  
APPLICANT: McConlogue, Lisa  
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and  
FILE REFERENCE: 228-US-NEMC2  
CURRENT APPLICATION NUMBER: US/09/724,566A  
CURRENT FILING DATE: 2000-11-28  
PRIOR APPLICATION NUMBER: US 09/501,708  
PRIOR FILING DATE: 2000-02-10  
PRIOR APPLICATION NUMBER: 60/119,571  
PRIOR FILING DATE: 1999-02-10  
PRIOR APPLICATION NUMBER: 60/139,172  
PRIOR FILING DATE: 1999-06-15  
NUMBER OF SEQ ID NOS: 104  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 60  
LENGTH: 420  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-724-566A-60

Query Match 100.0%; Score 104; DB 1; Length 420;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPVGL 41  
DB 22 TONGIRLPLRSGLGAPVGL 41

RESULT 4  
US-09-471-669A-60  
Sequence 60, Application US/09471669A  
Patent No. 6830918  
GENERAL INFORMATION:  
APPLICANT: Anderson, John P.  
APPLICANT: Baqi, Guribbal  
APPLICANT: Doane, Minh Tam  
APPLICANT: Frigon, No. 6830918mand  
APPLICANT: John, Varghese  
APPLICANT: Power, Michael  
APPLICANT: Sinha, Sukanto  
APPLICANT: Tatsuno, Gwen  
APPLICANT: Tung, Jay  
APPLICANT: Wang, Shuwen  
APPLICANT: McConlogue, Lisa  
TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS  
FILE REFERENCE: 015270-006430US  
CURRENT APPLICATION NUMBER: US/09/471,669A  
CURRENT FILING DATE: 1999-12-24  
PRIOR APPLICATION NUMBER: US 60/114,408  
PRIOR FILING DATE: 1998-12-31  
PRIOR APPLICATION NUMBER: US 60/119,571  
PRIOR FILING DATE: 1999-02-10  
PRIOR APPLICATION NUMBER: US 60/139,172  
PRIOR FILING DATE: 1999-06-15  
NUMBER OF SEQ ID NOS: 108  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 60  
LENGTH: 420  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-471-669A-60

Query Match 100.0%; Score 104; DB 1; Length 420;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPVGL 41  
DB 22 TONGIRLPLRSGLGAPVGL 41

RESULT 5  
US-09-548-372D-51  
Sequence 51, Application US/09548372D  
Patent No. 6420534  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/548,372D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 51  
LENGTH: 428  
TYPE: PRT  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Ap2(b) delta TM  
US-09-548-372D-51

```
Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 6
US-09-548-367D-51
; Sequence 51, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 51
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Ap2(b) delta TM
US-09-548-367D-51

Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 7
US-09-551-853D-51
; Sequence 51, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT APPLICATION NUMBER: US/09/551,853D
; CURRENT FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 51
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Artificial sequence
```

```
; FEATURE:
; OTHER INFORMATION: Hu-Ap2(b) delta TM
US-09-551-853D-51

Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 8
US-09-416-901B-51
; Sequence 51, Application US/09416901B
; Patent No. 6699671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/416,901B
; CURRENT FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 51
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Ap2(b) delta TM
US-09-416-901B-51

Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 9
US-09-548-376D-51
; Sequence 51, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280F
; CURRENT APPLICATION NUMBER: US/09/548,376D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
```

SEQ ID NO 51  
LENGTH: 428  
TYPE: PRT  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Aap2(b) delta TM  
US-09-548-376D-51

Query Match 100.0%; Score 104; DB 1; Length 428;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPRLSGGAPLGL 41  
DB 22 TOHGIRLPRLSGGAPLGL 41

RESULT 10  
US-09-794-927A-51  
Sequence 51, Application US/09794927A  
Patent No. 6727074  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280PG  
CURRENT APPLICATION NUMBER: US/09/794,927A  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 51  
LENGTH: 428  
TYPE: PRT  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Aap2(b) delta TM  
US-09-794-927A-51

Query Match 100.0%; Score 104; DB 1; Length 428;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPRLSGGAPLGL 41  
DB 22 TOHGIRLPRLSGGAPLGL 41

RESULT 11  
US-09-548-373D-51  
Sequence 51, Application US/09548373D  
Patent No. 6737510  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280B  
CURRENT APPLICATION NUMBER: US/09/548,373D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version. 3.1  
SEQ ID NO 51  
LENGTH: 428  
TYPE: PRT  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Aap2(b) delta TM  
US-09-548-373D-51

Query Match 100.0%; Score 104; DB 1; Length 428;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPRLSGGAPLGL 41  
DB 22 TOHGIRLPRLSGGAPLGL 41

RESULT 12  
US-09-795-847B-51  
Sequence 51, Application US/09795847B  
Patent No. 6753163  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280DS  
CURRENT APPLICATION NUMBER: US/09/795,847B  
CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 51  
LENGTH: 428  
TYPE: PRT  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Aap2(b) delta TM  
US-09-795-847B-51

Query Match 100.0%; Score 104; DB 1; Length 428;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPRLSGGAPLGL 41  
DB 22 TOHGIRLPRLSGGAPLGL 41

RESULT 13  
US-09-869-414-51  
Sequence 51, Application US/09869414  
Patent No. 6790610  
GENERAL INFORMATION:  
APPLICANT: Bienkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

```
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 28341/6280M
/ CURRENT APPLICATION NUMBER: US/09/869,414
/ PRIORITY FILING DATE: 2001-06-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 51
/ LENGTH: 428
/ TYPE: PRT
/ ORGANISM: Artificial Sequence
/ FEATURE:
/ OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
US-09-869-414-51
```

```
Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
QY 22 TQHGIRLPURSGGAPLGL 41
DB 22 TQHGIRLPURSGGAPLGL 41
```

```
RESULT 14
US-09-548-366F-51
/ Sequence 51, Application US/09548366F
/ Patent No. 6797487
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280F
/ CURRENT APPLICATION NUMBER: US/09/548,366F
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 51
/ LENGTH: 428
/ TYPE: PRT
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-09-548-366F-51
```

```
Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPURSGGAPLGL 41
DB 22 TQHGIRLPURSGGAPLGL 41
```

RESULT 15

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US-09-548-368D-51
/ Sequence 51, Application US/09548368D
/ Patent No. 6825023
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280C
/ CURRENT APPLICATION NUMBER: US/09/548,368D
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 51
/ LENGTH: 428
/ TYPE: PRT
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-09-548-368D-51
```

```
Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPURSGGAPLGL 41
DB 22 TQHGIRLPURSGGAPLGL 41
```

```
RESULT 16
US-09-794-925A-51
/ Sequence 51, Application US/09794925A
/ Patent No. 6828117
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280HT
/ CURRENT APPLICATION NUMBER: US/09/794,925A
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 51
/ LENGTH: 428
/ TYPE: PRT
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-09-794-925A-51
```

```
Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

QY 22 TQHGIRLPURSGGAPLGL 41



Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 17  
US-09-724-566A-74

Sequence 74, Application US/09724566A

Patent No. 6627739

GENERAL INFORMATION:

APPLICANT: Anderson, John P.

APPLICANT: Baal, Gurigbal

APPLICANT: Doane, Minh Tam

APPLICANT: Frigon, No. 6627739mand

APPLICANT: John, Varghese

APPLICANT: Power, Michael

APPLICANT: Sinha, Sukanto

APPLICANT: Tatsuno, Gwen

APPLICANT: Tung, Jay

APPLICANT: Wang, Shuwen

APPLICANT: McConlogue, Lisa

TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and

TITLE OF INVENTION: Methods

FILE REFERENCE: 228-US-NEWC2

CURRENT FILING DATE: 2000-11-28

PRIOR FILING DATE: 2000-02-10

PRIOR APPLICATION NUMBER: US 09/501,708

PRIOR FILING DATE: 2000-02-10

PRIOR APPLICATION NUMBER: 60/119,571

PRIOR FILING DATE: 1999-02-10

PRIOR APPLICATION NUMBER: 60/139,172

PRIOR FILING DATE: 1999-06-15

NUMBER OF SEQ ID NOS: 104

SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 74

LENGTH: 431

TYPE: PRT

ORGANISM: Homo sapiens

US-09-724-566A-74

Query Match 100.0%; Score 104; DB 1; Length 431;

Best Local Similarity 100.0%; Pred. No. 38;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41

Db 1 T0HGIRLPLRSGLGAPLGL 20

RESULT 18  
US-09-471-669A-74

Sequence 74, Application US/09471669A

Patent No. 6630918

GENERAL INFORMATION:

APPLICANT: Anderson, John P.

APPLICANT: Baal, Gurigbal

APPLICANT: Doane, Minh Tam

APPLICANT: Frigon, No. 6630918mand

APPLICANT: John, Varghese

APPLICANT: Power, Michael

APPLICANT: Sinha, Sukanto

APPLICANT: Tatsuno, Gwen

APPLICANT: Tung, Jay

APPLICANT: Wang, Shuwen

APPLICANT: McConlogue, Lisa

APPLICANT: Elan Pharmaceuticals, Inc.

TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS

FILE REFERENCE: 015270-006430US

CURRENT FILING DATE: 2000-04-12

PRIOR FILING DATE: 1999-12-24

PRIOR APPLICATION NUMBER: US 60/114,408

PRIOR FILING DATE: 1998-12-31

PRIOR APPLICATION NUMBER: US 60/119,571

PRIOR FILING DATE: 1999-02-10

PRIOR APPLICATION NUMBER: US 60/139,172

PRIOR FILING DATE: 1999-06-15

NUMBER OF SEQ ID NOS: 108

SOFTWARE: Patent In Ver. 2.1

SEQ ID NO 74

LENGTH: 431

TYPE: PRT

ORGANISM: Homo sapiens

US-09-471-669A-74

Query Match 100.0%; Score 104; DB 1; Length 431;

Best Local Similarity 100.0%; Pred. No. 38;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41

Db 1 T0HGIRLPLRSGLGAPLGL 20

RESULT 19  
US-09-548-372D-26

Sequence 26, Application US/09548372D

Patent No. 6420534

GENERAL INFORMATION:

APPLICANT: GURNEY ET AL.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

TITLE OF INVENTION: THEREOF

FILE REFERENCE: 29915/62801

CURRENT FILING DATE: 2000-04-12

PRIOR FILING DATE: 2000-04-12

PRIOR APPLICATION NUMBER: US 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: Patent In version 3.1

SEQ ID NO 26

LENGTH: 433

TYPE: PRT

ORGANISM: Homo sapiens

US-09-548-372D-26

Query Match 100.0%; Score 104; DB 1; Length 433;

Best Local Similarity 100.0%; Pred. No. 38;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 T0HGIRLPLRSGLGAPLGL 41

Db 2 T0HGIRLPLRSGLGAPLGL 21

RESULT 20  
US-09-548-367D-26

Sequence 26, Application US/09548367D

Patent No. 6440698

GENERAL INFORMATION:

APPLICANT: GURNEY ET AL.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

TITLE OF INVENTION: THEREOF

FILE REFERENCE: 29915/62801

CURRENT FILING DATE: 2000-04-12

PRIOR FILING DATE: 2000-04-12

PRIOR APPLICATION NUMBER: US 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 60/101,594

;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn version 3.1  
;; SEQ ID NO 26  
;; LENGTH: 433  
;; TYPE: PRT  
;; ORGANISM: Homo sapiens  
US-09-548-367D-26

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
Db 2 TQHGIRLPRLRSGLGAPLGL 21

RESULT 21  
US-09-551-853D-26  
; Sequence 26, Application US/09551853D  
; Patent No. 6500667  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280L  
; CURRENT APPLICATION NUMBER: US/09/551,853D  
; PRIOR FILING DATE: 2000-04-18  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 26  
; LENGTH: 433  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-551-853D-26

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
Db 2 TQHGIRLPRLRSGLGAPLGL 21

RESULT 22  
US-09-416-901B-26  
; Sequence 26, Application US/09416901B  
; Patent No. 6699671  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280A  
; CURRENT APPLICATION NUMBER: US/09/416,901B  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24

;; NUMBER OF SEQ ID NOS: 72  
;; SOFTWARE: PatentIn version 3.1  
;; SEQ ID NO 26  
;; LENGTH: 433  
;; TYPE: PRT  
;; ORGANISM: Homo sapiens  
US-09-416-901B-26

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
Db 2 TQHGIRLPRLRSGLGAPLGL 21

RESULT 23  
US-09-548-376D-26  
; Sequence 26, Application US/09548376D  
; Patent No. 6706485  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
; FILE REFERENCE: 29915/6280F  
; CURRENT APPLICATION NUMBER: US/09/548,376D  
; PRIOR FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 26  
; LENGTH: 433  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-376D-26

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
Db 2 TQHGIRLPRLRSGLGAPLGL 21

RESULT 24  
US-09-794-927A-26  
; Sequence 26, Application US/09794927A  
; Patent No. 6727074  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280FG  
; CURRENT APPLICATION NUMBER: US/09/794,927A  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 26  
LENGTH: 433  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-794-927A-26

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPKRSGLGAPLGL 41  
Db 2 TQHGIRLPKRSGLGAPLGL 21

RESULT 25  
US-09-548-373D-26  
Sequence 26, Application US/09548373D  
Patent No. 6737510  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/62808  
CURRENT APPLICATION NUMBER: US/09/548,373D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 26  
LENGTH: 433  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-548-373D-26

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPKRSGLGAPLGL 41  
Db 2 TQHGIRLPKRSGLGAPLGL 21

RESULT 26  
US-09-795-847B-26  
Sequence 26, Application US/09795847B  
Patent No. 6753163  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert U.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/62808  
CURRENT APPLICATION NUMBER: US/09/795,847B  
CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 26  
LENGTH: 433  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-795-847B-26

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPKRSGLGAPLGL 41  
Db 2 TQHGIRLPKRSGLGAPLGL 21

RESULT 27  
US-09-869-414-26  
Sequence 26, Application US/09869414  
Patent No. 6790610  
GENERAL INFORMATION:  
APPLICANT: Beinowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/62808  
CURRENT APPLICATION NUMBER: US/09/869,414  
CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 26  
LENGTH: 433  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-869-414-26

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPKRSGLGAPLGL 41  
Db 2 TQHGIRLPKRSGLGAPLGL 21

RESULT 28  
US-09-548-366F-26  
Sequence 26, Application US/09548366F  
Patent No. 6797487  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/62807  
CURRENT APPLICATION NUMBER: US/09/548,366F  
CURRENT FILING DATE: 2000-04-12

```

; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-366F-26
```

```

Query Match      100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```

QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      2 TQHGIRLPRLRSGLGAPLGL 21
```

```

RESULT 29
US-09-548-368D-26
; Sequence 26, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-368D-26
```

```

Query Match      100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```

QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      2 TQHGIRLPRLRSGLGAPLGL 21
```

```

RESULT 30
US-09-794-925A-26
; Sequence 26, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/794,925A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
```

```

; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-925A-26
```

```

Query Match      100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```

QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      2 TQHGIRLPRLRSGLGAPLGL 21
```

```

RESULT 31
US-09-806-194A-26
; Sequence 26, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; CURRENT FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-806-194A-26
```

```

Query Match      100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```

QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      2 TQHGIRLPRLRSGLGAPLGL 21
```

```

RESULT 32
US-09-548-372D-53
; Sequence 53, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280I
; CURRENT APPLICATION NUMBER: US/09/548,372D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
```

;; PRIOR APPLICATION NUMBER: US 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn version 3.1  
;; SEQ ID NO 53  
;; LENGTH: 434  
;; TYPE: PRT  
;; ORGANISM: Artificial sequence  
;; FEATURE:  
;; OTHER INFORMATION: Hu-Aep2(b) delta TM  
US-09-548-372D-53

Query Match 100.0%; Score 104; DB 1; Length 434;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TQHGIRLPLRSGGAPLGL 41  
Db 22 TQHGIRLPLRSGGAPLGL 41

## RESULT 33

US-09-548-367D-53  
;; Sequence 53, Application US/09548367D  
;; Patent No. 6440698  
;; GENERAL INFORMATION:  
;; APPLICANT: GURNEY ET AL.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
;; TITLE OF INVENTION: THEREOF  
;; FILE REFERENCE: 29915/6280H  
;; CURRENT APPLICATION NUMBER: US/09/548,367D  
;; CURRENT FILING DATE: 2000-04-12  
;; PRIOR APPLICATION NUMBER: US 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn version 3.1  
;; SEQ ID NO 53  
;; LENGTH: 434  
;; TYPE: PRT  
;; ORGANISM: Artificial sequence  
;; FEATURE:  
;; OTHER INFORMATION: Hu-Aep2(b) delta TM  
US-09-548-367D-53

Query Match 100.0%; Score 104; DB 1; Length 434;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TQHGIRLPLRSGGAPLGL 41  
Db 22 TQHGIRLPLRSGGAPLGL 41

## RESULT 34

US-09-551-853D-53  
;; Sequence 53, Application US/09551853D  
;; Patent No. 6500667  
;; GENERAL INFORMATION:  
;; APPLICANT: GURNEY ET AL.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
;; FILE REFERENCE: 29915/6280L  
;; CURRENT APPLICATION NUMBER: US/09/551,853D

;; CURRENT FILING DATE: 2000-04-18  
;; PRIOR APPLICATION NUMBER: US 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn version 3.1  
;; SEQ ID NO 53  
;; LENGTH: 434  
;; TYPE: PRT  
;; ORGANISM: Artificial sequence  
;; FEATURE:  
;; OTHER INFORMATION: Hu-Aep2(b) delta TM  
US-09-551-853D-53

Query Match 100.0%; Score 104; DB 1; Length 434;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TQHGIRLPLRSGGAPLGL 41  
Db 22 TQHGIRLPLRSGGAPLGL 41

## RESULT 35

US-09-416-901B-53  
;; Sequence 53, Application US/09416901B  
;; Patent No. 669671  
;; GENERAL INFORMATION:  
;; APPLICANT: GURNEY ET AL.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
;; TITLE OF INVENTION: THEREOF  
;; FILE REFERENCE: 29915/6280A  
;; CURRENT APPLICATION NUMBER: US/09/416,901B  
;; CURRENT FILING DATE: 1999-10-13  
;; PRIOR APPLICATION NUMBER: US 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 72  
;; SOFTWARE: PatentIn version 3.1  
;; SEQ ID NO 53  
;; LENGTH: 434  
;; TYPE: PRT  
;; ORGANISM: Artificial sequence  
;; FEATURE:  
;; OTHER INFORMATION: Hu-Aep2(b) delta TM  
US-09-416-901B-53

Query Match 100.0%; Score 104; DB 1; Length 434;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TQHGIRLPLRSGGAPLGL 41  
Db 22 TQHGIRLPLRSGGAPLGL 41

## RESULT 36

US-09-548-376D-53  
;; Sequence 53, Application US/09548376D  
;; Patent No. 6706485  
;; GENERAL INFORMATION:  
;; APPLICANT: GURNEY ET AL.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR

```

; TITLE OF INVENTION: AND USES
; FILE REFERENCE: THEREFOR
; CURRENT APPLICATION NUMBER: US/09/548,376D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-548-376D-53
```

```
Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPLRSGLGAPLGL 41
DB      22 TOHGIRLPLRSGLGAPLGL 41
```

```
RESULT 37
US-09-794-927A-53
; Sequence 53, Application US/09794927A
; Patent No. 6727074
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-794-927A-53
```

```
Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPLRSGLGAPLGL 41
DB      22 TOHGIRLPLRSGLGAPLGL 41
```

RESULT 38

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US-09-548-373D-53
; Sequence 53, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280B
; CURRENT APPLICATION NUMBER: US/09/548,373D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-548-373D-53
```

```
Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPLRSGLGAPLGL 41
DB      22 TOHGIRLPLRSGLGAPLGL 41
```

```
RESULT 39
US-09-795-847B-53
; Sequence 53, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847B
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-795-847B-53
```

```
Query Match          100.0%; Score 104; DB 1; Length 434;
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Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLSGLGAPLGL 41  
Db 22 TQHGIRLPRLSGLGAPLGL 41

## RESULT 40

US-09-869-414-53  
; Sequence 53, Application US/09869414  
; Patent No. 6790610  
; GENERAL INFORMATION:  
; APPLICANT: Belkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M  
; CURRENT FILING DATE: 2001-06-27  
; PRIOR APPLICATION NUMBER: US/09/869,414  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 53  
; LENGTH: 434  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)  
; OTHER INFORMATION: delta TM  
US-09-869-414-53

Query Match 100.0%; Score 104; DB 1; Length 434;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLSGLGAPLGL 41  
Db 22 TQHGIRLPRLSGLGAPLGL 41

## RESULT 41

US-09-548-366F-53  
; Sequence 53, Application US/09548366F  
; Patent No. 6797487  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280J  
; CURRENT FILING DATE: US/09/548,366F  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 53  
; LENGTH: 434  
; TYPE: PRT

ORGANISM: Artificial sequence  
; FEATURE:  
; OTHER INFORMATION: Hu-Aap2(b) delta TM  
US-09-548-366F-53

Query Match 100.0%; Score 104; DB 1; Length 434;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLSGLGAPLGL 41  
Db 22 TQHGIRLPRLSGLGAPLGL 41

## RESULT 42

US-09-548-368D-53  
; Sequence 53, Application US/09548368D  
; Patent No. 6825023  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280C  
; CURRENT FILING DATE: US/09/548,368D  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 53  
; LENGTH: 434  
; TYPE: PRT  
; ORGANISM: Artificial sequence  
; FEATURE:  
; OTHER INFORMATION: Hu-Aap2(b) delta TM  
US-09-548-368D-53

Query Match 100.0%; Score 104; DB 1; Length 434;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLSGLGAPLGL 41  
Db 22 TQHGIRLPRLSGLGAPLGL 41

## RESULT 43

US-09-794-925A-53  
; Sequence 53, Application US/09794925A  
; Patent No. 6828117  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: ALZHEIMER'S Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280H  
; CURRENT FILING DATE: US/09/794,925A  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 53  
LENGTH: 434  
TYPE: PRT  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Ap2(b) delta TM  
US-09-794-925A-53

Query Match 100.0%; Score 104; DB 1; Length 434;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
DB 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 44  
US-09-548-372D-22  
Sequence 22, Application US/09548372D  
Patent No. 6420534  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/548,372D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 22  
LENGTH: 446  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-548-372D-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
DB 15 TQHGIRLPRLRSGLGAPLGL 34

RESULT 45  
US-09-548-367D-22  
Sequence 22, Application US/09548367D  
Patent No. 6440698  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/548,367D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 22  
LENGTH: 446  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-548-367D-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
DB 15 TQHGIRLPRLRSGLGAPLGL 34

RESULT 46  
US-09-551-853D-22  
Sequence 22, Application US/0951853D  
Patent No. 650067  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/551,853D  
CURRENT FILING DATE: 2000-04-18  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 22  
LENGTH: 446  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-551-853D-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
DB 15 TQHGIRLPRLRSGLGAPLGL 34

RESULT 47  
US-09-416-901B-22  
Sequence 22, Application US/09416901B  
Patent No. 6699671  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/416,901B  
CURRENT FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24



NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 22  
LENGTH: 446  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-416-901B-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAGAPLGL 41  
DB 15 TONGIRLPLRSGGAGAPLGL 34

## RESULT 48

US-09-548-376D-22  
Sequence 22, Application US/09548376D  
Patent No. 6706485  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
TITLE OF INVENTION: AND USES  
FILE REFERENCE: 28915/6280F  
CURRENT APPLICATION NUMBER: US/09/548,376D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 22  
LENGTH: 446  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-548-376D-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAGAPLGL 41  
DB 15 TONGIRLPLRSGGAGAPLGL 34

## RESULT 49

US-09-794-927A-22  
Sequence 22, Application US/09794927A  
Patent No. 6727074  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28915/6280F  
CURRENT APPLICATION NUMBER: US/09/794,927A  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 22  
LENGTH: 446  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-794-927A-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAGAPLGL 41  
DB 15 TONGIRLPLRSGGAGAPLGL 34

## RESULT 50

US-09-548-373D-22  
Sequence 22, Application US/09548373D  
Patent No. 6737510  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28915/6280B  
CURRENT APPLICATION NUMBER: US/09/548,373D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 22  
LENGTH: 446  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-548-373D-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAGAPLGL 41  
DB 15 TONGIRLPLRSGGAGAPLGL 34

## RESULT 51

US-09-795-847B-22  
Sequence 22, Application US/09795847B  
Patent No. 6753163  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinikson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/6280DE  
CURRENT APPLICATION NUMBER: US/09/795,847B  
CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493



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; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23,404,133
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 22
; LENGTH: 446
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-925A-22
```

```
Query Match          100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 T0HGIRLPFRSGLGAPLGL 41
        |||||||
Db      15 T0HGIRLPFRSGLGAPLGL 34
```

```
RESULT 56
US-09-806-194A-22
; Sequence 22, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; CURRENT FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 22
; LENGTH: 446
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-806-194A-22
```

```
Query Match          100.0%; Score 104; DB 1; Length 446;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 T0HGIRLPFRSGLGAPLGL 41
        |||||||
Db      15 T0HGIRLPFRSGLGAPLGL 34
```

```
RESULT 57
US-09-724-566A-59
; Sequence 59, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Baal, Guribhal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varjasee
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tateuno, Gwen
```

```
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; FILE REFERENCE: 228-US-NEWC2
; CURRENT APPLICATION NUMBER: US/09/724,566A
; CURRENT FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 59
; LENGTH: 452
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-724-566A-59
```

```
Query Match          100.0%; Score 104; DB 1; Length 452;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 T0HGIRLPFRSGLGAPLGL 41
        |||||||
Db      22 T0HGIRLPFRSGLGAPLGL 41
```

```
RESULT 58
US-09-471-669A-59
; Sequence 59, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Baal, Guribhal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Varjasee
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tateuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
; FILE REFERENCE: 015270-006430US
; CURRENT APPLICATION NUMBER: US/09/471,669A
; CURRENT FILING DATE: 1999-12-24
; PRIOR APPLICATION NUMBER: US 60/114,408
; PRIOR FILING DATE: 1998-12-31
; PRIOR APPLICATION NUMBER: US 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: US 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 108
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 59
; LENGTH: 452
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-471-669A-59
```

```
Query Match          100.0%; Score 104; DB 1; Length 452;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 T0HGIRLPFRSGLGAPLGL 41
        |||||||
Db      22 T0HGIRLPFRSGLGAPLGL 41
```

RESULT 59  
US-09-548-372D-30  
; Sequence 30, Application US/09548372D  
; Patent No. 6420534  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/62801  
; CURRENT APPLICATION NUMBER: US/09/548,372D  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 30  
; LENGTH: 453  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-372D-30

Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGLGAPLGL 41  
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 60  
US-09-548-367D-30  
; Sequence 30, Application US/09548367D  
; Patent No. 6440698  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/62808  
; CURRENT APPLICATION NUMBER: US/09/548,367D  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 30  
; LENGTH: 453  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-367D-30

Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGLGAPLGL 41  
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 61  
US-09-551-853D-30  
; Sequence 30, Application US/09551853D  
; Patent No. 6500667  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280L  
; CURRENT APPLICATION NUMBER: US/09/551,853D  
; CURRENT FILING DATE: 2000-04-18  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 30  
; LENGTH: 453  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-551-853D-30

Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGLGAPLGL 41  
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 62  
US-09-416-901B-30  
; Sequence 30, Application US/09416901B  
; Patent No. 6699671  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280A  
; CURRENT APPLICATION NUMBER: US/09/416,901B  
; CURRENT FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 72  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 30  
; LENGTH: 453  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-416-901B-30

Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGLGAPLGL 41  
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 63  
US-09-548-376D-30  
; Sequence 30, Application US/09548376D  
; Patent No. 6706485  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
; TITLE OF INVENTION: AND USES  
; TITLE OF INVENTION: THEREOF  
; FILE REFERENCE: 29915/6280F  
; CURRENT APPLICATION NUMBER: US/09/548,376D  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 30  
; LENGTH: 453  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-376D-30

Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPFRSGLGAPLGL 41  
Db 22 TQHGIRLPFRSGLGAPLGL 41

RESULT 64  
US-09-794-927A-30  
; Sequence 30, Application US/09794927A  
; Patent No. 6727074  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; TITLE OF INVENTION: Therefor  
; FILE REFERENCE: 29915/6280FG  
; CURRENT APPLICATION NUMBER: US/09/794,927A  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 30  
; LENGTH: 453  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-794-927A-30

Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPFRSGLGAPLGL 41  
Db 22 TQHGIRLPFRSGLGAPLGL 41

RESULT 65  
US-09-548-373D-30  
; Sequence 30, Application US/09548373D  
; Patent No. 6737510  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; TITLE OF INVENTION: THEREOF  
; FILE REFERENCE: 29915/6280B  
; CURRENT APPLICATION NUMBER: US/09/548,373D  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 30  
; LENGTH: 453  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-373D-30

Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPFRSGLGAPLGL 41  
Db 22 TQHGIRLPFRSGLGAPLGL 41

RESULT 66  
US-09-795-847B-30  
; Sequence 30, Application US/09795847B  
; Patent No. 6753163  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/6280DE  
; CURRENT APPLICATION NUMBER: US/09/795,847B  
; CURRENT FILING DATE: 2001-02-28  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 30  
; LENGTH: 453  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-795-847B-30

Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 38;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPLRSGIGCAPLGL 41

Db 22 TQHGIRLPLRSGIGCAPLGL 41

## RESULT 67

US-09-869-414-30  
; Sequence 30, Application US/09869414  
; Patent No. 6790610  
; GENERAL INFORMATION:  
; APPLICANT: Beinkowsky et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/62804  
; CURRENT APPLICATION NUMBER: US/09/869,414  
; PRIOR FILING DATE: 2001-06-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 30  
; LENGTH: 453  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-869-414-30

Query Match Best Local Similarity 100.0%; Score 104; DB 1; Length 453;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPLRSGIGCAPLGL 41

Db 22 TQHGIRLPLRSGIGCAPLGL 41

## RESULT 68

US-09-548-366F-30  
; Sequence 30, Application US/09548366F  
; Patent No. 6797487  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280J  
; CURRENT APPLICATION NUMBER: US/09/548,366F  
; PRIOR FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 30  
; LENGTH: 453  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-366F-30

Query Match 100.0%; Score 104; DB 1; Length 453;

Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPLRSGIGCAPLGL 41

Db 22 TQHGIRLPLRSGIGCAPLGL 41

## RESULT 69

US-09-548-368D-30  
; Sequence 30, Application US/09548368D  
; Patent No. 6825823  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280C  
; CURRENT APPLICATION NUMBER: US/09/548,368D  
; PRIOR FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 30  
; LENGTH: 453  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-368D-30

Query Match Best Local Similarity 100.0%; Score 104; DB 1; Length 453;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPLRSGIGCAPLGL 41

Db 22 TQHGIRLPLRSGIGCAPLGL 41

## RESULT 70

US-09-794-925A-30  
; Sequence 30, Application US/09794925A  
; Patent No. 6828117  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280HT  
; CURRENT APPLICATION NUMBER: US/09/794,925A  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 30  
; LENGTH: 453  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-794-925A-30

Query Match 100.0%; Score 104; DB 1; Length 453;

Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41  
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 71  
US-09-806-194A-30  
; Sequence 30, Application US/09806194A  
; Patent No. 6835565  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; APPLICANT: Pharmacia & Upjohn Company  
; TITLE OF INVENTION: Alzheimer's Disease Secretase  
; FILE REFERENCE: 6177.P CP  
; CURRENT APPLICATION NUMBER: US/09/806,194A  
; PRIOR FILING DATE: 2001-09-17  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 49  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 30  
; LENGTH: 453  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-806-194A-30

Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41  
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 72  
US-09-548-372D-24  
; Sequence 24, Application US/09548372D  
; Patent No. 6420534  
; GENERAL INFORMATION:  
; APPLICANT: Gurney ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/62801  
; CURRENT APPLICATION NUMBER: US/09/548,372D  
; PRIOR FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 24  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-372D-24

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41  
Db 28 T0HGIRLPLRSGLGAPLGL 47

RESULT 73  
US-09-548-367D-32  
; Sequence 32, Application US/09548372D  
; Patent No. 6420534  
; GENERAL INFORMATION:  
; APPLICANT: Gurney ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/62801  
; CURRENT APPLICATION NUMBER: US/09/548,372D  
; PRIOR FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 32  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-372D-32

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41  
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 74  
US-09-548-367D-24  
; Sequence 24, Application US/09548367D  
; Patent No. 6440698  
; GENERAL INFORMATION:  
; APPLICANT: Gurney ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280H  
; CURRENT APPLICATION NUMBER: US/09/548,367D  
; PRIOR FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 24  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-367D-24

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41  
|||||  
Db 28 TOHGIRLPLRSGLGAPLGL 47

RESULT 75  
US-09-548-367D-32  
; Sequence 32, Application US/09548367D  
; Patent No. 6440698  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280H  
; CURRENT APPLICATION NUMBER: US/09/548,367D  
; PRIOR FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 32  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-367D-32

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41  
|||||  
Db 22 TOHGIRLPLRSGLGAPLGL 41

RESULT 76  
US-09-551-853D-24  
; Sequence 24, Application US/09551853D  
; Patent No. 6500667  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280L  
; CURRENT APPLICATION NUMBER: US/09/551,853D  
; PRIOR FILING DATE: 2000-04-18  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 24  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-551-853D-24

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41

Db 28 TOHGIRLPLRSGLGAPLGL 47  
|||||

RESULT 77  
US-09-551-853D-32  
; Sequence 32, Application US/09551853D  
; Patent No. 6500667  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280L  
; CURRENT APPLICATION NUMBER: US/09/551,853D  
; PRIOR FILING DATE: 2000-04-18  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 32  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-551-853D-32

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41  
|||||  
Db 22 TOHGIRLPLRSGLGAPLGL 41

RESULT 78  
US-09-416-901B-24  
; Sequence 24, Application US/09416901B  
; Patent No. 6699671  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280A  
; CURRENT APPLICATION NUMBER: US/09/416,901B  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 72  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 24  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-416-901B-24

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41  
|||||



Db 28 T0HGIRLPLRSGLGAPLGL 47

RESULT 79  
US-09-416-901B-32  
Sequence 32, Application US/09416901B  
Patent No. 669671  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280A  
CURRENT APPLICATION NUMBER: US/09/416,901B  
CURRENT FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: Patentin version 3.1  
SEQ ID NO 32  
LENGTH: 459  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-416-901B-32

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41  
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 80  
US-09-548-376D-24  
Sequence 24, Application US/09548376D  
Patent No. 6706485  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
FILE REFERENCE: 29915/6280F  
CURRENT APPLICATION NUMBER: US/09/548,376D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin version 3.1  
SEQ ID NO 24  
LENGTH: 459  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-548-376D-24

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 22 T0HGIRLPLRSGLGAPLGL 41  
Db 22 T0HGIRLPLRSGLGAPLGL 41

Db 28 T0HGIRLPLRSGLGAPLGL 47

RESULT 81  
US-09-548-376D-32  
Sequence 32, Application US/09548376D  
Patent No. 6706485  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
FILE REFERENCE: 29915/6280F  
CURRENT APPLICATION NUMBER: US/09/548,376D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin version 3.1  
SEQ ID NO 32  
LENGTH: 459  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-548-376D-32

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41  
Db 22 T0HGIRLPLRSGLGAPLGL 41

RESULT 82  
US-09-794-927A-24  
Sequence 24, Application US/09794927A  
Patent No. 6727074  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280FG  
CURRENT APPLICATION NUMBER: US/09/794,927A  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 24  
LENGTH: 459  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-794-927A-24

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPLRSGLGAPLGL 41  
Db 28 TOHGIRLPLRSGLGAPLGL 47

RESULT 83  
US-09-794-927A-32  
; Sequence 32, Application US/09794927A  
; Patent No. 6727074  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280FG  
; CURRENT APPLICATION NUMBER: US/09/794,927A  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 32  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-794-927A-32

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPLRSGLGAPLGL 41  
Db 22 TOHGIRLPLRSGLGAPLGL 41

RESULT 84  
US-09-548-373D-24  
; Sequence 24, Application US/09548373D  
; Patent No. 6737510  
; GENERAL INFORMATION:  
; APPLICANT: Gurney ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280B  
; CURRENT APPLICATION NUMBER: US/09/548,373D  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 24  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-373D-24

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPLRSGLGAPLGL 41  
Db 28 TOHGIRLPLRSGLGAPLGL 47

RESULT 85  
US-09-548-373D-32  
; Sequence 32, Application US/09548373D  
; Patent No. 6737510  
; GENERAL INFORMATION:  
; APPLICANT: Gurney ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280B  
; CURRENT APPLICATION NUMBER: US/09/548,373D  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 32  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-373D-32

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPLRSGLGAPLGL 41  
Db 22 TOHGIRLPLRSGLGAPLGL 41

RESULT 86  
US-09-795-847B-24  
; Sequence 24, Application US/09795847B  
; Patent No. 6753163  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrikson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280DE  
; CURRENT APPLICATION NUMBER: US/09/795,847B  
; CURRENT FILING DATE: 2001-02-28  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 24  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens

US-09-795-847B-24

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAPLGL 41  
DB 28 TONGIRLPLRSGGAPLGL 47

RESULT 87

US-09-795-847B-32

; Sequence 32, Application US/09795847B  
; Patent No. 6753163  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280DE  
; CURRENT APPLICATION NUMBER: US/09/795, 847B  
; CURRENT FILING DATE: 2001-02-28  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 32  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-795-847B-32

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAPLGL 41  
DB 22 TONGIRLPLRSGGAPLGL 41

RESULT 88

US-09-869-414-24

; Sequence 24, Application US/09869414  
; Patent No. 6790610  
; GENERAL INFORMATION:  
; APPLICANT: Beinowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M  
; CURRENT APPLICATION NUMBER: US/09/869,414  
; CURRENT FILING DATE: 2001-06-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 24

; LENGTH: 459

; TYPE: PRT

; ORGANISM: Homo sapiens

US-09-869-414-24

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAPLGL 41  
DB 28 TONGIRLPLRSGGAPLGL 47

RESULT 89

US-09-869-414-32

; Sequence 32, Application US/09869414  
; Patent No. 6790610  
; GENERAL INFORMATION:  
; APPLICANT: Beinowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M  
; CURRENT APPLICATION NUMBER: US/09/869,414  
; CURRENT FILING DATE: 2001-06-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 32  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-869-414-32

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TONGIRLPLRSGGAPLGL 41  
DB 22 TONGIRLPLRSGGAPLGL 41

RESULT 90

US-09-548-366F-24

; Sequence 24, Application US/09548366F  
; Patent No. 6797487  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280J  
; CURRENT APPLICATION NUMBER: US/09/548,366F  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23

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/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 24
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-548-366F-24
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Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      28 TQHGIRLPRLRSGLGAPLGL 47
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RESULT 91
US-09-548-366F-32
/ Sequence 32, Application US/09548366F
/ Patent No. 6797487
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280J
/ CURRENT APPLICATION NUMBER: US/09/548,366F
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 32
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-548-366F-32
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Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

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RESULT 92
US-09-548-368D-24
/ Sequence 24, Application US/09548368D
/ Patent No. 6825023
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280C
/ CURRENT APPLICATION NUMBER: US/09/548,368D
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
```

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/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 24
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-548-368D-24
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Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      28 TQHGIRLPRLRSGLGAPLGL 47
```

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RESULT 93
US-09-548-368D-32
/ Sequence 32, Application US/09548368D
/ Patent No. 6825023
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280C
/ CURRENT APPLICATION NUMBER: US/09/548,368D
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 32
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-548-368D-32
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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QY      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

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RESULT 94
US-09-794-925A-24
/ Sequence 24, Application US/09794925A
/ Patent No. 6828117
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925A
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
```

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; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-925A-24

Query Match      100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAGAPLGL 41
Db      28 TQHGIRLPRLRSGLGAGAPLGL 47

RESULT 95
US-09-794-925A-32
; Sequence 32, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-925A-32

Query Match      100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAGAPLGL 41

RESULT 96
US-09-806-194A-24
; Sequence 24, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; CURRENT FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
```

```

; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-806-194A-24

Query Match      100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAGAPLGL 41
Db      28 TQHGIRLPRLRSGLGAGAPLGL 47

RESULT 97
US-09-806-194A-32
; Sequence 32, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; CURRENT FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-806-194A-32

Query Match      100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAGAPLGL 41

RESULT 98
US-09-548-372D-6
; Sequence 6, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280I
; CURRENT APPLICATION NUMBER: US/09/548,372D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
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; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-372D-6
```

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Query Match      100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
QY      22 TQHGIRLPRLSGLGAPLGL 41
Db      22 TQHGIRLPRLSGLGAPLGL 41
```

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RESULT 99
US-09-548-367D-6
; Sequence 6, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-367D-6
```

```
Query Match      100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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QY      22 TQHGIRLPRLSGLGAPLGL 41
Db      22 TQHGIRLPRLSGLGAPLGL 41
```

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RESULT 100
US-09-551-853D-6
; Sequence 6, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT APPLICATION NUMBER: US/09/551,853D
; CURRENT FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 6
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; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-551-853D-6
```

```
Query Match      100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
QY      22 TQHGIRLPRLSGLGAPLGL 41
Db      22 TQHGIRLPRLSGLGAPLGL 41
```

```
RESULT 101
US-09-416-901B-6
; Sequence 6, Application US/09416901B
; Patent No. 6699671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/416,901B
; CURRENT FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-416-901B-6
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```
Query Match      100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
QY      22 TQHGIRLPRLSGLGAPLGL 41
Db      22 TQHGIRLPRLSGLGAPLGL 41
```

```
RESULT 102
US-09-548-376D-6
; Sequence 6, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; TITLE OF INVENTION: AND USES
; FILE REFERENCE: 29915/6280F
; CURRENT APPLICATION NUMBER: US/09/548,376D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 6
```

LENGTH: 476  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-548-376D-6

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 T0HGIRLPRLRSGLGAPLGL 41  
DB 22 T0HGIRLPRLRSGLGAPLGL 41

RESULT 103  
US-09-794-927A-6  
Sequence 6, Application US/09794927A  
Patent No. 6727074  
GENERAL INFORMATION:

APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280FG  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: US/09/794,927A  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 6  
LENGTH: 476  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-794-927A-6

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 T0HGIRLPRLRSGLGAPLGL 41  
DB 22 T0HGIRLPRLRSGLGAPLGL 41

RESULT 104  
US-09-548-373D-6  
Sequence 6, Application US/09548373D  
Patent No. 6737510  
GENERAL INFORMATION:

APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280B  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US/09/548,373D  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1

SEQ ID NO 6  
LENGTH: 476  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-548-373D-6

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 T0HGIRLPRLRSGLGAPLGL 41  
DB 22 T0HGIRLPRLRSGLGAPLGL 41

RESULT 105  
US-09-795-847B-6  
Sequence 6, Application US/09795847B  
Patent No. 6753163  
GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280DE  
CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: US/09/795,847B  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 6  
LENGTH: 476  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-795-847B-6

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 T0HGIRLPRLRSGLGAPLGL 41  
DB 22 T0HGIRLPRLRSGLGAPLGL 41

RESULT 106  
US-09-869-414-6  
Sequence 6, Application US/09869414  
Patent No. 6790610  
GENERAL INFORMATION:

APPLICANT: Bienkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M  
CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: US/09/869,414  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133

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; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-869-414-6
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Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```

Qy      22 T0HGIRLPRLRSGLGAGAPLGL 41
Db      22 T0HGIRLPRLRSGLGAGAPLGL 41
```

```

RESULT 107
US-09-548-366F-6
; Sequence 6, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,366F
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-366F-6
```

```

Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```

Qy      22 T0HGIRLPRLRSGLGAGAPLGL 41
Db      22 T0HGIRLPRLRSGLGAGAPLGL 41
```

```

RESULT 108
US-09-548-368D-6
; Sequence 6, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
```

```

; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-368D-6
```

```

Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```

Qy      22 T0HGIRLPRLRSGLGAGAPLGL 41
Db      22 T0HGIRLPRLRSGLGAGAPLGL 41
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```

RESULT 109
US-09-794-925A-6
; Sequence 6, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/794,925A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-925A-6
```

```

Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```

Qy      22 T0HGIRLPRLRSGLGAGAPLGL 41
Db      22 T0HGIRLPRLRSGLGAGAPLGL 41
```

```

RESULT 110
US-09-806-194A-6
; Sequence 6, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: GURNEY, Mark B.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177_P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
```



;; CURRENT FILING DATE: 2001-09-17  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 49  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 6  
;; LENGTH: 476  
;; TYPE: PRT  
;; ORGANISM: Homo sapiens  
US-09-806-194A-6

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPNRSGLGAPLGL 41  
Db 22 TOHGIRLPNRSGLGAPLGL 41

RESULT 111  
US-09-724-566A-66  
;; Sequence 66, Application US/09724566A  
;; Patent No. 6627739  
;; GENERAL INFORMATION:  
;; APPLICANT: Anderson, John P.  
;; APPLICANT: Babi, Gurigbal  
;; APPLICANT: Doane, Minh Tam  
;; APPLICANT: Frigon, No. 6627739mand  
;; APPLICANT: John, Varghese  
;; APPLICANT: Power, Michael  
;; APPLICANT: Sinha, Sukanto  
;; APPLICANT: Tatsuno, Gwen  
;; APPLICANT: Tung, Jay  
;; APPLICANT: Wang, Shuwen  
;; APPLICANT: McConlogue, Lisa  
;; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and  
;; TITLE OF INVENTION: Methods  
;; FILE REFERENCE: 228-US-NEWC2  
;; CURRENT APPLICATION NUMBER: US/09/724,566A  
;; CURRENT FILING DATE: 2000-11-28  
;; PRIOR APPLICATION NUMBER: US 09/501,708  
;; PRIOR FILING DATE: 2000-02-10  
;; PRIOR APPLICATION NUMBER: 60/119,571  
;; PRIOR FILING DATE: 1999-02-10  
;; PRIOR APPLICATION NUMBER: 60/139,172  
;; PRIOR FILING DATE: 1999-06-15  
;; NUMBER OF SEQ ID NOS: 104  
;; SOFTWARE: FastSeq for Windows Version 4.0  
;; SEQ ID NO 66  
;; LENGTH: 480  
;; TYPE: PRT  
;; ORGANISM: Homo sapiens  
US-09-724-566A-66

Query Match 100.0%; Score 104; DB 1; Length 480;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPNRSGLGAPLGL 41  
Db 1 TOHGIRLPNRSGLGAPLGL 20

RESULT 112  
US-09-471-669A-66  
;; Sequence 66, Application US/09471669A  
;; Patent No. 6830918  
;; GENERAL INFORMATION:  
;; APPLICANT: Anderson, John P.  
;; APPLICANT: Babi, Gurigbal  
;; APPLICANT: Doane, Minh Tam  
;; APPLICANT: Frigon, No. 6830918mand

;; APPLICANT: John, Varghese  
;; APPLICANT: Power, Michael  
;; APPLICANT: Sinha, Sukanto  
;; APPLICANT: Tatsuno, Gwen  
;; APPLICANT: Tung, Jay  
;; APPLICANT: Wang, Shuwen  
;; APPLICANT: McConlogue, Lisa  
;; APPLICANT: Elan Pharmaceuticals, Inc.  
;; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS  
;; FILE REFERENCE: 015270-006450US  
;; CURRENT APPLICATION NUMBER: US/09/471,669A  
;; CURRENT FILING DATE: 1999-12-24  
;; PRIOR APPLICATION NUMBER: US 60/114,408  
;; PRIOR FILING DATE: 1998-12-31  
;; PRIOR APPLICATION NUMBER: US 60/119,571  
;; PRIOR FILING DATE: 1999-02-10  
;; PRIOR APPLICATION NUMBER: US 60/139,172  
;; PRIOR FILING DATE: 1999-06-15  
;; NUMBER OF SEQ ID NOS: 108  
;; SOFTWARE: PatentIn Ver. 2.1  
;; SEQ ID NO 66  
;; LENGTH: 480  
;; TYPE: PRT  
;; ORGANISM: Homo sapiens  
US-09-471-669A-66

Query Match 100.0%; Score 104; DB 1; Length 480;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPNRSGLGAPLGL 41  
Db 1 TOHGIRLPNRSGLGAPLGL 20

RESULT 113  
US-09-604-608-2  
;; Sequence 2, Application US/09604608  
;; Patent No. 6545127  
;; GENERAL INFORMATION:  
;; APPLICANT: Tang, Jordan J.N.  
;; APPLICANT: Lin, Xinni  
;; APPLICANT: Koelsch, Gerald  
;; TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods  
;; TITLE OF INVENTION: Of Use Thereof  
;; FILE REFERENCE: OMRF 179  
;; CURRENT APPLICATION NUMBER: US/09/604,608  
;; CURRENT FILING DATE: 2000-06-27  
;; PRIOR APPLICATION NUMBER: 60/141,363  
;; PRIOR FILING DATE: 1999-06-28  
;; PRIOR APPLICATION NUMBER: 60/168,060  
;; PRIOR FILING DATE: 1999-11-30  
;; PRIOR APPLICATION NUMBER: 60/177,836  
;; PRIOR FILING DATE: 2000-01-25  
;; PRIOR APPLICATION NUMBER: 60/178,368  
;; PRIOR FILING DATE: 2000-01-27  
;; PRIOR APPLICATION NUMBER: 60/210,292  
;; PRIOR FILING DATE: 2000-06-08  
;; NUMBER OF SEQ ID NOS: 31  
;; SOFTWARE: PatentIn Ver. 2.1  
;; SEQ ID NO 2  
;; LENGTH: 488  
;; TYPE: PRT  
;; ORGANISM: Homo sapiens

FEATURE:  
;; OTHER INFORMATION: Purified Memapsin 2  
;; OTHER INFORMATION: Amino Acids 28-48 are remnant putative propeptide  
;; OTHER INFORMATION: Residues  
;; OTHER INFORMATION: Amino Acids 58-61, 78, 80, 82-83, 116, 118-121,  
;; OTHER INFORMATION: 156, 166, 174, 246, 274, 276, 278-281, 283, and  
;; OTHER INFORMATION: 376-377 are residues in contact with the OM99-2  
;; OTHER INFORMATION: inhibitor  
;; OTHER INFORMATION: Amino acids 54-57, 61-68, 73-80, 86-89, 109-111,

OTHER INFORMATION: 113-118, 123-134, 143-154, 165-168, 198-202, and  
OTHER INFORMATION: 220-224 are N-lobe Beta Strands  
OTHER INFORMATION: Amino Acids 184-191 and 210-217 are N-lobe Helices  
OTHER INFORMATION: Amino acids 237-240, 247-249, 251-256, 259-260,  
OTHER INFORMATION: 273-275, 282-285, 316-318, 331-336, 342-348,  
OTHER INFORMATION: 354-357, 372-375, 380-383, 390-395,  
OTHER INFORMATION: 400-405, and 418-420 are C-lobe Beta Strands  
OTHER INFORMATION: Amino Acids 286-299, 307-310, 350-353, 364-367,  
OTHER INFORMATION: and 427-431 are C-lobe Helices  
US-09-604-608-2

Query Match 100.0%; Score 104; DB 1; Length 488;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLSGGAPLGL 41  
Db 9 TQHGIRLPRLSGGAPLGL 28

RESULT 114  
US-09-009-191-2  
Sequence 2, Application US/09009191  
Patent No. 6319689  
GENERAL INFORMATION:  
APPLICANT: POWELL, DAVID  
APPLICANT: CHAPMAN, CONRAD  
APPLICANT: MURPHY, KAY  
APPLICANT: SMITH, TRUDI  
TITLE OF INVENTION: ASP2  
NUMBER OF SEQUENCES: 6  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: RATNER & PRESTIA  
STREET: P.O. BOX 980  
CITY: VALLEY FORGE  
STATE: PA  
COUNTRY: USA  
ZIP: 19482  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/009,191  
FILING DATE: 20-JAN-1998  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: UK 9701684.4  
FILING DATE: 28-JAN-1997  
ATTORNEY/AGENT INFORMATION:  
NAME: PRESTIA, PAUL F  
REGISTRATION NUMBER: 23,031  
REFERENCE/DOCKET NUMBER: GH-70368  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 610-407-0700  
TELEFAX: 610-407-0701  
TELEX: 846169  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 501 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-009-191-2

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLSGGAPLGL 41  
Db 22 TQHGIRLPRLSGGAPLGL 41

Db 22 TQHGIRLPRLSGGAPLGL 41

RESULT 115  
US-09-548-372D-4  
Sequence 4, Application US/09548372D  
Patent No. 6420534  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/548,372D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 4  
LENGTH: 501  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-548-372D-4

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLSGGAPLGL 41  
Db 22 TQHGIRLPRLSGGAPLGL 41

RESULT 116  
US-09-548-367D-4  
Sequence 4, Application US/09548367D  
Patent No. 6440698  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/548,367D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 4  
LENGTH: 501  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-548-367D-4

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLSGGAPLGL 41  
Db 22 TQHGIRLPRLSGGAPLGL 41

```
RESULT 117
US-09-551-853D-4
; Sequence 4, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT FILING DATE: US/09/551,853D
; PRIOR FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-551-853D-4

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPFRSGLGAPLGL 41
Db      22 TQHGIRLPFRSGLGAPLGL 41

RESULT 118
US-09-724-566A-2
; Sequence 2, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Baer, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigson, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; FILE REFERENCE: 228-US-NEMC2
; CURRENT FILING DATE: US/09/724,566A
; PRIOR FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-724-566A-2
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPFRSGLGAPLGL 41
Db      22 TQHGIRLPFRSGLGAPLGL 41

RESULT 119
US-09-416-901B-4
; Sequence 4, Application US/09416901B
; Patent No. 6696671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT FILING DATE: US/09/416,901B
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-416-901B-4

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPFRSGLGAPLGL 41
Db      22 TQHGIRLPFRSGLGAPLGL 41

RESULT 120
US-09-548-376D-4
; Sequence 4, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; FILE REFERENCE: 29915/6280F
; CURRENT FILING DATE: US/09/548,376D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-376D-4
```

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TQHGIRLPURSGLGAPLGL 41  
Db 22 TQHGIRLPURSGLGAPLGL 41

## RESULT 121

US-09-794-927A-4  
; Sequence 4, Application US/09794927A  
; Patent No. 6727074  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280FG  
; CURRENT APPLICATION NUMBER: US/09/794,927A  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 4  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-794-927A-4

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TQHGIRLPURSGLGAPLGL 41  
Db 22 TQHGIRLPURSGLGAPLGL 41

## RESULT 122

US-09-548-373D-4  
; Sequence 4, Application US/09548373D  
; Patent No. 6737510  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280B  
; CURRENT APPLICATION NUMBER: US/09/548,373D  
; PRIOR FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 4  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-373D-4

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TQHGIRLPURSGLGAPLGL 41  
Db 22 TQHGIRLPURSGLGAPLGL 41

## RESULT 123

US-09-795-847B-4  
; Sequence 4, Application US/09795847B  
; Patent No. 6753163  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280DB  
; CURRENT APPLICATION NUMBER: US/09/795,847B  
; PRIOR FILING DATE: 2001-02-28  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 4  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-795-847B-4

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TQHGIRLPURSGLGAPLGL 41  
Db 22 TQHGIRLPURSGLGAPLGL 41

## RESULT 124

US-09-869-414-4  
; Sequence 4, Application US/09869414  
; Patent No. 6790610  
; GENERAL INFORMATION:  
; APPLICANT: Bienkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M  
; CURRENT APPLICATION NUMBER: US/09/869,414  
; PRIOR FILING DATE: 2001-06-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO 4  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-869-414-4

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 T0HGIRLPRLRSGLGAPLGL 41  
DB 22 T0HGIRLPRLRSGLGAPLGL 41

RESULT 125  
US-09-548-366F-4  
; Sequence 4, Application US/09548366F  
; Patent No. 6797487  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280J  
; CURRENT APPLICATION NUMBER: US/09/548,366F  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: Patentin version 3.1  
; SEQ ID NO 4  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-366F-4

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 T0HGIRLPRLRSGLGAPLGL 41  
DB 22 T0HGIRLPRLRSGLGAPLGL 41

RESULT 126  
US-09-949-016-6810  
; Sequence 6810, Application US/09949016  
; Patent No. 6812339  
; GENERAL INFORMATION:  
; APPLICANT: VENTER, J. Craig et al.  
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED  
; WITH INFECTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF  
; FILE REFERENCE: C1001307  
; CURRENT APPLICATION NUMBER: US/09/949,016  
; CURRENT FILING DATE: 2000-04-14  
; PRIOR APPLICATION NUMBER: 60/241,755  
; PRIOR FILING DATE: 2000-10-20  
; PRIOR APPLICATION NUMBER: 60/237,768  
; PRIOR FILING DATE: 2000-10-03  
; PRIOR APPLICATION NUMBER: 60/231,498  
; PRIOR FILING DATE: 2000-09-08  
; NUMBER OF SEQ ID NOS: 207012  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 6810

; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Human  
US-09-949-016-6810

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 T0HGIRLPRLRSGLGAPLGL 41  
DB 22 T0HGIRLPRLRSGLGAPLGL 41

RESULT 127  
US-09-548-368D-4  
; Sequence 4, Application US/09548368D  
; Patent No. 6825023  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280C  
; CURRENT APPLICATION NUMBER: US/09/548,368D  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: Patentin version 3.1  
; SEQ ID NO 4  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-368D-4

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 T0HGIRLPRLRSGLGAPLGL 41  
DB 22 T0HGIRLPRLRSGLGAPLGL 41

RESULT 128  
US-09-794-925A-4  
; Sequence 4, Application US/09794925A  
; Patent No. 6828117  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280H  
; CURRENT APPLICATION NUMBER: US/09/794,925A  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: Patentin Ver. 2.0

```
/ SEQ ID NO 4
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-794-925A-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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QY      22 TQHGIRLPRLRSGLGAPLGL 41
      |||
Db      22 TQHGIRLPRLRSGLGAPLGL 41
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## RESULT 129

```
US-09-471-669A-2
/ Sequence 2, Application US/09471669A
/ Patent No. 6830918
/ GENERAL INFORMATION:
/ APPLICANT: Anderson, John P.
/ APPLICANT: Basi, Guridbal
/ APPLICANT: Doane, Minh Tam
/ APPLICANT: Prigson, No. 6830918mand
/ APPLICANT: John, Varghese
/ APPLICANT: Power, Michael
/ APPLICANT: Sinha, Sukanto
/ APPLICANT: Tateuno, Gwen
/ APPLICANT: Tung, Jay
/ APPLICANT: Wang, Shuwen
/ APPLICANT: McConlogue, Lisa
/ TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
/ FILE REFERENCE: 015270-006430US
/ CURRENT APPLICATION NUMBER: US/09/471,669A
/ CURRENT FILING DATE: 1999-12-24
/ PRIOR APPLICATION NUMBER: US 60/114,408
/ PRIOR FILING DATE: 1998-12-31
/ PRIOR APPLICATION NUMBER: US 60/119,571
/ PRIOR FILING DATE: 1999-02-10
/ PRIOR APPLICATION NUMBER: US 60/139,172
/ PRIOR FILING DATE: 1999-06-15
/ NUMBER OF SEQ ID NOS: 108
/ SOFTWARE: PatentIn Ver. 2.1
/ SEQ ID NO 2
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-471-669A-2
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPRLRSGLGAPLGL 41
      |||
Db      22 TQHGIRLPRLRSGLGAPLGL 41
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## RESULT 130

```
US-09-806-194A-4
/ Sequence 4, Application US/09806194A
/ Patent No. 6835565
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Blenkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riglang
/ APPLICANT: Pharmacia & Upjohn Company
/ TITLE OF INVENTION: Alzheimer's Disease Secretase
/ FILE REFERENCE: 6177 P CP
/ CURRENT APPLICATION NUMBER: US/09/806,194A
```

```
/ CURRENT FILING DATE: 2001-09-17
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 49
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 4
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-806-194A-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPRLRSGLGAPLGL 41
      |||
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

## RESULT 131

```
US-09-604-608-3
/ Sequence 3, Application US/09604608
/ Patent No. 6545127
/ GENERAL INFORMATION:
/ APPLICANT: Tang, Jordan J.N.
/ APPLICANT: Lin, Xindi
/ APPLICANT: Koelsch, Gerald
/ TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
/ FILE REFERENCE: OMRP 179
/ CURRENT APPLICATION NUMBER: US/09/604,608
/ CURRENT FILING DATE: 2000-06-27
/ PRIOR APPLICATION NUMBER: 60/141,363
/ PRIOR FILING DATE: 1999-06-28
/ PRIOR APPLICATION NUMBER: 60/168,060
/ PRIOR FILING DATE: 1999-11-30
/ PRIOR APPLICATION NUMBER: 60/177,836
/ PRIOR FILING DATE: 2000-01-25
/ PRIOR APPLICATION NUMBER: 60/178,368
/ PRIOR FILING DATE: 2000-01-27
/ PRIOR APPLICATION NUMBER: 60/210,292
/ PRIOR FILING DATE: 2000-06-08
/ NUMBER OF SEQ ID NOS: 31
/ SOFTWARE: PatentIn Ver. 2.1
/ SEQ ID NO 3
/ LENGTH: 503
/ TYPE: PRT
/ ORGANISM: Homo sapiens
/ FEATURE:
/ OTHER INFORMATION: Pro-memapsin 2
/ OTHER INFORMATION: Amino Acids 1-15 are vector-derived residues
/ OTHER INFORMATION: Amino Acids 16-64 are a putative pro peptide
/ OTHER INFORMATION: Amino Acids 1-13 are the T7 promoter
/ OTHER INFORMATION: Amino Acids 16-456 are Pro-memapsin 2-T1
/ OTHER INFORMATION: Amino Acids 16-421 are Promemapsin 2-T2
US-09-604-608-3
```

```
Query Match          100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPRLRSGLGAPLGL 41
      |||
Db      24 TQHGIRLPRLRSGLGAPLGL 43
```

## RESULT 132

```
US-09-949-016-10253
/ Sequence 10253, Application US/09949016
/ Patent No. 6812339
/ GENERAL INFORMATION:
/ APPLICANT: VENTER, J. Craig et al.
```

```

; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; FILE REFERENCE: CU001307
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 60/237,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 10253
; LENGTH: 578
; TYPE: PRT
; ORGANISM: Human
US-09-949-016-10253

Query Match          100.0%; Score 104; DB 1; Length 578;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22  TQHGIRLPRLRSGLGAPLGL 41
Db      99  TQHGIRLPRLRSGLGAPLGL 118

RESULT 133
US-09-548-372D-73
; Sequence 73, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 73
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-548-372D-73

Query Match          74.0%; Score 77; DB 1; Length 476;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy      22  TQHGIRLPRLRSGLGAPLGL 41
Db      22  TQHGIRLPRLRSGLGAPLGL 41

RESULT 134
US-09-548-367D-73
; Sequence 73, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280F
```

```

; CURRENT APPLICATION NUMBER: US/09/548,367D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 73
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-548-367D-73

Query Match          74.0%; Score 77; DB 1; Length 476;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy      22  TQHGIRLPRLRSGLGAPLGL 41
Db      22  TQHGIRLPRLRSGLGAPLGL 41

RESULT 135
US-09-551-853D-73
; Sequence 73, Application US/09551853D
; Patent No. 650667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT APPLICATION NUMBER: US/09/551,853D
; CURRENT FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 73
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-551-853D-73

Query Match          74.0%; Score 77; DB 1; Length 476;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy      22  TQHGIRLPRLRSGLGAPLGL 41
Db      22  TQHGIRLPRLRSGLGAPLGL 41

RESULT 136
US-09-548-376D-73
; Sequence 73, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 29915/6280F
```

```
; CURRENT APPLICATION NUMBER: US/09/548,376D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 73
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-548-376D-73
```

```
Query Match          74.0%; Score 77; DB 1; Length 476;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 TGGGIRLPRLRSGLGAPPLGL 41
Db 22 TGGGIRLPRLRSGLGAPPLGL 41
```

```
RESULT 137
US-09-548-373D-73
; Sequence 73, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280B
; CURRENT APPLICATION NUMBER: US/09/548,373D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 73
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-548-373D-73
```

```
Query Match          74.0%; Score 77; DB 1; Length 476;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 TGGGIRLPRLRSGLGAPPLGL 41
Db 22 TGGGIRLPRLRSGLGAPPLGL 41
```

```
RESULT 138
US-09-548-366F-73
; Sequence 73, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280J
; CURRENT APPLICATION NUMBER: US/09/548,366F
```

```
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 73
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-548-366F-73
```

```
Query Match          74.0%; Score 77; DB 1; Length 476;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 TGGGIRLPRLRSGLGAPPLGL 41
Db 22 TGGGIRLPRLRSGLGAPPLGL 41
```

```
RESULT 139
US-09-548-368D-73
; Sequence 73, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 73
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-548-368D-73
```

```
Query Match          74.0%; Score 77; DB 1; Length 476;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 TGGGIRLPRLRSGLGAPPLGL 41
Db 22 TGGGIRLPRLRSGLGAPPLGL 41
```

```
RESULT 140
US-09-713-158-2
; Sequence 2, Application US/09713158
; Patent No. 6361975
; GENERAL INFORMATION:
; APPLICANT: ZHU, YUAN
; APPLICANT: LI, XIAOTONG
; APPLICANT: POWELL, DAVID J.
; APPLICANT: CHRISTIE, GARY
; TITLE OF INVENTION: MOUSE ASPARTIC SECRETASE-2 (MASP-2)
; FILE REFERENCE: GP-70660
```



```
; CURRENT APPLICATION NUMBER: US/09/713,158
; CURRENT FILING DATE: 2000-11-15
; PRIOR APPLICATION NUMBER: 60/165,800
; PRIOR FILING DATE: 1999-11-16
; NUMBER OF SEQ ID NOS: 2
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: MUS MUSCULUS
; US-09-713-158-2
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPRLRSGLGAPPLGL 41
      |||||
Db      22 THLGIRLPRLRSGLAGPPLGL 41
```

```
RESULT 141
US-09-548-372D-8
; Sequence 8, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Mus musculus
; US-09-548-372D-8
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPRLRSGLGAPPLGL 41
      |||||
Db      22 THLGIRLPRLRSGLAGPPLGL 41
```

```
RESULT 142
US-09-548-367D-8
; Sequence 8, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,367D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
```

```
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Mus musculus
; US-09-548-367D-8
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPRLRSGLGAPPLGL 41
      |||||
Db      22 THLGIRLPRLRSGLAGPPLGL 41
```

```
RESULT 143
US-09-551-853D-8
; Sequence 8, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/551,853D
; CURRENT FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Mus musculus
; US-09-551-853D-8
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPRLRSGLGAPPLGL 41
      |||||
Db      22 THLGIRLPRLRSGLAGPPLGL 41
```

```
RESULT 144
US-09-724-566A-65
; Sequence 65, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukeel
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
```

```
/ TITLE OF INVENTION: Methods
/ FILE REFERENCE: 228-US-NEMC2
/ CURRENT APPLICATION NUMBER: US/09/724,566A
/ CURRENT FILING DATE: 2000-11-28
/ PRIOR APPLICATION NUMBER: US 09/501,708
/ PRIOR FILING DATE: 2000-02-10
/ PRIOR APPLICATION NUMBER: 60/119,571
/ PRIOR FILING DATE: 1999-02-10
/ PRIOR APPLICATION NUMBER: 60/139,172
/ PRIOR FILING DATE: 1999-06-15
/ NUMBER OF SEQ ID NOS: 104
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 65
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-09-724-566A-65
```

```
Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPRLRSGLAGAPPLGL 41
DB 22 THLGIRLPRLRSGLAGAPPLGL 41
```

```
RESULT 145
US-09-416-901B-8
/ Sequence 8, Application US/09416901B
/ Patent No. 6639671
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280A
/ CURRENT APPLICATION NUMBER: US/09/416,901B
/ CURRENT FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 72
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-09-416-901B-8
```

```
Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPRLRSGLAGAPPLGL 41
DB 22 THLGIRLPRLRSGLAGAPPLGL 41
```

```
RESULT 146
US-09-548-376D-8
/ Sequence 8, Application US/09548376D
/ Patent No. 6706485
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
/ TITLE OF INVENTION: AND USES
/ TITLE OF INVENTION: THEREOF
/ FILE REFERENCE: 29915/6280F
```

```
/ CURRENT APPLICATION NUMBER: US/09/548,376D
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-09-548-376D-8
```

```
Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPRLRSGLAGAPPLGL 41
DB 22 THLGIRLPRLRSGLAGAPPLGL 41
```

```
RESULT 147
US-09-794-927A-8
/ Sequence 8, Application US/09794927A
/ Patent No. 6727074
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280G
/ CURRENT APPLICATION NUMBER: US/09/794,927A
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-09-794-927A-8
```

```
Query Match 74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 22 TQHGIRLPRLRSGLAGAPPLGL 41
DB 22 THLGIRLPRLRSGLAGAPPLGL 41
```

```
RESULT 148
US-09-548-373D-8
/ Sequence 8, Application US/09548373D
/ Patent No. 6737510
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ TITLE OF INVENTION: THEREOF
```

FILE REFERENCE: 29915/6280B  
; CURRENT APPLICATION NUMBER: US/09/548,373D  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: Patentin version 3.1  
; SEQ ID NO 8  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Mus musculus  
US-09-548-373D-8

Query Match 74.0%; Score 77; DB 1; Length 501;  
Best Local Similarity 80.0%; Pred. No. 94;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

OY 22 THGIRLPRLRSGLGAPPLGL 41  
| ||||| ||||| |||||  
Db 22 THGIRLPRLRSGLGAPPLGL 41

RESULT 149  
US-09-795-847B-8  
; Sequence 8, Application US/09795847B  
; Patent No. 6753163  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/6280D  
; CURRENT APPLICATION NUMBER: US/09/795,847B  
; CURRENT FILING DATE: 2001-02-28  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO 8  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Mus musculus  
US-09-795-847B-8

Query Match 74.0%; Score 77; DB 1; Length 501;  
Best Local Similarity 80.0%; Pred. No. 94;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

OY 22 THGIRLPRLRSGLGAPPLGL 41  
| ||||| ||||| |||||  
Db 22 THGIRLPRLRSGLGAPPLGL 41

RESULT 150  
US-09-869-414-8  
; Sequence 8, Application US/09869414

Patent No. 6790610  
; GENERAL INFORMATION:  
; APPLICANT: Bienkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/6280M  
; CURRENT APPLICATION NUMBER: US/09/869,414  
; CURRENT FILING DATE: 2001-06-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO 8  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Mus musculus  
US-09-869-414-8

Query Match 74.0%; Score 77; DB 1; Length 501;  
Best Local Similarity 80.0%; Pred. No. 94;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

OY 22 THGIRLPRLRSGLGAPPLGL 41  
| ||||| ||||| |||||  
Db 22 THGIRLPRLRSGLGAPPLGL 41

RESULT 151  
US-09-548-366F-8  
; Sequence 8, Application US/09548366F  
; Patent No. 6797487  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; TITLE OF INVENTION: THEREOF  
; FILE REFERENCE: 29915/6280J  
; CURRENT APPLICATION NUMBER: US/09/548,366F  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: Patentin version 3.1  
; SEQ ID NO 8  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Mus musculus  
US-09-548-366F-8

Query Match 74.0%; Score 77; DB 1; Length 501;  
Best Local Similarity 80.0%; Pred. No. 94;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

OY 22 THGIRLPRLRSGLGAPPLGL 41  
| ||||| ||||| |||||  
Db 22 THGIRLPRLRSGLGAPPLGL 41

RESULT 152  
US-09-548-368D-8

```
/ Sequence 8, Application US/09548368D
/ Patent No. 6825023
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280C
/ CURRENT APPLICATION NUMBER: US/09/548,368D
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentin version 3.1
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-09-548-368D-8
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
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```
OY 22 THGIRLPLRSGLAGPPLGL 41
Db 22 THGIRLPLRSGLAGPPLGL 41
```

```
RESULT 153
US-09-794-925A-8
/ Sequence 8, Application US/09794925A
/ Patent No. 6828117
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925A
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-09-794-925A-8
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
OY 22 THGIRLPLRSGLAGPPLGL 41
Db 22 THGIRLPLRSGLAGPPLGL 41
```

RESULT 154

```
US-09-806-194A-8
/ Sequence 8, Application US/09806194A
/ Patent No. 6835565
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ APPLICANT: Pharmacia & Upjohn Company
/ TITLE OF INVENTION: Alzheimer's Disease Secretase
/ FILE REFERENCE: 6177.P CP
/ CURRENT APPLICATION NUMBER: US/09/806,194A
/ CURRENT FILING DATE: 2001-09-17
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 49
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-09-806-194A-8
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 94;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
OY 22 THGIRLPLRSGLAGPPLGL 41
Db 22 THGIRLPLRSGLAGPPLGL 41
```

```
RESULT 155
US-09-471-669A-65
/ Sequence 65, Application US/09471669A
/ Patent No. 6830918
/ GENERAL INFORMATION:
/ APPLICANT: Anderson, John P.
/ APPLICANT: Basl, Gurigdal
/ APPLICANT: Doane, Minh Tam
/ APPLICANT: Frigon, No. 6830918mand
/ APPLICANT: John, Varghese
/ APPLICANT: Power, Michael
/ APPLICANT: Sinha, Sukanto
/ APPLICANT: Tateano, Gwen
/ APPLICANT: Tung, Jay
/ APPLICANT: Wang, Shuwen
/ APPLICANT: McConlogue, Lisa
/ APPLICANT: Elian Pharmaceuticals, Inc.
/ TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
/ FILE REFERENCE: 015270-006430US
/ CURRENT APPLICATION NUMBER: US/09/471,669A
/ CURRENT FILING DATE: 1999-12-24
/ PRIOR APPLICATION NUMBER: US 60/114,408
/ PRIOR FILING DATE: 1998-12-31
/ PRIOR APPLICATION NUMBER: US 60/119,571
/ PRIOR FILING DATE: 1999-02-10
/ PRIOR APPLICATION NUMBER: US 60/139,172
/ PRIOR FILING DATE: 1999-06-15
/ NUMBER OF SEQ ID NOS: 108
/ SOFTWARE: Patentin Ver. 2.1
/ SEQ ID NO 65
/ LENGTH: 427
/ TYPE: PRT
/ ORGANISM: Mus sp.
/ FEATURES:
/ OTHER INFORMATION: pBS/MuimBain H#3 construct
US-09-471-669A-65
```

```
Query Match          29.3%; Score 30.5; DB 1; Length 427;
Best Local Similarity 35.0%; Pred. No. 1.9e+02;
Matches 7; Conservative 3; Mismatches 3; Indels 7; Gaps 1;
```

Oy 27 RLPLRSG-----GAPL 39  
Db 400 RIPARGIHFSGRHRCGAPL 419

## RESULT 156

US-09-471-669A-107  
Sequence 107, Application US/09471669A

Patent No. 6830918

GENERAL INFORMATION:

APPLICANT: Anderson, John P.

APPLICANT: Baal, Gurigbal

APPLICANT: Doane, Minh Tam

APPLICANT: Frigon, No. 6830918mand

APPLICANT: John, Varghese

APPLICANT: Power, Michael

APPLICANT: Sinha, Sukanto

APPLICANT: Tatsuno, Gwen

APPLICANT: Tung, Jay

APPLICANT: Wang, Shuwen

APPLICANT: McConlogue, Lisa

TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS

FILE REFERENCE: 015270-006430US

CURRENT APPLICATION NUMBER: US/09/471,669A

PRIOR FILING DATE: 1998-12-24

PRIOR APPLICATION NUMBER: US 60/114,408

PRIOR FILING DATE: 1998-12-31

PRIOR APPLICATION NUMBER: US 60/119,571

PRIOR FILING DATE: 1999-02-10

PRIOR APPLICATION NUMBER: US 60/139,172

PRIOR FILING DATE: 1999-06-15

NUMBER OF SEQ ID NOS: 108

SOFTWARE: Patent In Ver. 2.1

SEQ ID NO 107

LENGTH: 231

TYPE: PRT

ORGANISM: Mus sp.

FEATURE:

OTHER INFORMATION: pbs/MuImpain E17 Brain #17 construct

US-09-471-669A-107

Query Match 21.2% Score 22; DB 1; Length 231;  
Best Local Similarity 31.2% Pred. No. 1.9e+02;  
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Oy 25 GIRLPLRSGLGAPLG 40  
Db 68 GVVVPYTGKWEIG 83

## RESULT 157

US-09-724-566A-75

Sequence 75, Application US/09724566A

Patent No. 6627739

GENERAL INFORMATION:

APPLICANT: Anderson, John P.

APPLICANT: Baal, Gurigbal

APPLICANT: Doane, Minh Tam

APPLICANT: Frigon, No. 6627739mand

APPLICANT: John, Varghese

APPLICANT: Power, Michael

APPLICANT: Sinha, Sukanto

APPLICANT: Tatsuno, Gwen

APPLICANT: Tung, Jay

APPLICANT: Wang, Shuwen

APPLICANT: McConlogue, Lisa

TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and

FILE REFERENCE: 228-US-NEWC2

CURRENT APPLICATION NUMBER: US/09/724,566A

CURRENT FILING DATE: 2000-11-28

PRIOR APPLICATION NUMBER: US 09/501,708  
PRIOR FILING DATE: 2000-02-10  
PRIOR APPLICATION NUMBER: 60/119,571  
PRIOR FILING DATE: 1999-02-10  
PRIOR APPLICATION NUMBER: 60/139,172  
PRIOR FILING DATE: 1999-06-15  
NUMBER OF SEQ ID NOS: 104  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 75  
LENGTH: 361  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-724-566A-75

Query Match 21.2% Score 22; DB 1; Length 361;  
Best Local Similarity 31.2% Pred. No. 1.9e+02;  
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Oy 25 GIRLPLRSGLGAPLG 40  
Db 65 GVVVPYTGKWEIG 80

## RESULT 158

US-09-471-669A-75

Sequence 75, Application US/09471669A

Patent No. 6830918

GENERAL INFORMATION:

APPLICANT: Anderson, John P.

APPLICANT: Baal, Gurigbal

APPLICANT: Doane, Minh Tam

APPLICANT: Frigon, No. 6830918mand

APPLICANT: John, Varghese

APPLICANT: Power, Michael

APPLICANT: Sinha, Sukanto

APPLICANT: Tatsuno, Gwen

APPLICANT: Tung, Jay

APPLICANT: Wang, Shuwen

APPLICANT: McConlogue, Lisa

TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS

FILE REFERENCE: 015270-006430US

CURRENT APPLICATION NUMBER: US/09/471,669A

PRIOR FILING DATE: 1998-12-24

PRIOR APPLICATION NUMBER: US 60/114,408

PRIOR FILING DATE: 1998-12-31

PRIOR APPLICATION NUMBER: US 60/119,571

PRIOR FILING DATE: 1999-02-10

PRIOR APPLICATION NUMBER: US 60/139,172

PRIOR FILING DATE: 1999-06-15

NUMBER OF SEQ ID NOS: 108

SOFTWARE: Patent In Ver. 2.1

SEQ ID NO 75

LENGTH: 361

TYPE: PRT

ORGANISM: Homo sapiens

US-09-471-669A-75

Query Match 21.2% Score 22; DB 1; Length 361;  
Best Local Similarity 31.2% Pred. No. 1.9e+02;  
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Oy 25 GIRLPLRSGLGAPLG 40  
Db 65 GVVVPYTGKWEIG 80

## RESULT 159

US-09-724-566A-71

Sequence 71, Application US/09724566A

Patent No. 6627739

GENERAL INFORMATION:

APPLICANT: Anderson, John P.

```

; APPLICANT: Baai, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Simha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; FILE REFERENCE: 228-US-NEWC2
; CURRENT APPLICATION NUMBER: US/09/724,566A
; PRIOR FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: PatSeq for Windows Version 4.0
; SEQ ID NO 71
; LENGTH: 374
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-724-566A-71
```

```

Query Match          21.2%; Score 22; DB 1; Length 374;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```

Qy      25 GIRLPLRSLGAGAPLG 40
      | : | | | | | | | |
Db      82 GYVVPYTGKWEGLG 97
```

```

RESULT 160
US-09-471-669A-71
; Sequence 71, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Baai, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Simha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; APPLICANT: Eilan Pharmaceuticals, Inc.
; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
; FILE REFERENCE: 015270-006430US
; CURRENT APPLICATION NUMBER: US/09/471,669A
; PRIOR FILING DATE: 1999-12-24
; PRIOR APPLICATION NUMBER: US 60/114,408
; PRIOR FILING DATE: 1998-12-31
; PRIOR APPLICATION NUMBER: US 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: US 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 108
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 71
; LENGTH: 374
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-471-669A-71
```

```

Query Match          21.2%; Score 22; DB 1; Length 374;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```

Qy      25 GIRLPLRSLGAGAPLG 40
      | : | | | | | | | |
Db      82 GYVVPYTGKWEGLG 97
```

```

RESULT 161
US-09-471-669A-108
; Sequence 108, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Baai, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Simha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; APPLICANT: Eilan Pharmaceuticals, Inc.
; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
; FILE REFERENCE: 015270-006430US
; CURRENT APPLICATION NUMBER: US/09/471,669A
; PRIOR FILING DATE: 1999-12-24
; PRIOR APPLICATION NUMBER: US 60/114,408
; PRIOR FILING DATE: 1998-12-31
; PRIOR APPLICATION NUMBER: US 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: US 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 108
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 108
; LENGTH: 380
; TYPE: PRT
; ORGANISM: Mus sp.
; FEATURE:
; OTHER INFORMATION: pbs/Mu1mpain E17 Brain#15 construct
US-09-471-669A-108
```

```

Query Match          21.2%; Score 22; DB 1; Length 380;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```

Qy      25 GIRLPLRSLGAGAPLG 40
      | : | | | | | | | |
Db      68 GYVVPYTGKWEGLG 83
```

```

RESULT 162
US-09-724-566A-70
; Sequence 70, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Baai, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Simha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; FILE REFERENCE: Methods
```

```

1      Patent No.6627739
2      GENERAL INFORMATION:
3      APPLICANT: Anderson, John P.
4      APPLICANT: Baai, Gurigbal
5      APPLICANT: Doane, Minh Tam
6      APPLICANT: Frisgon, No. 6627739mand
7      APPLICANT: John, Varghese
8      APPLICANT: Power, Michael
9      APPLICANT: Sinha, Sukanto
10     APPLICANT: Tatsuno, Gwen
11     APPLICANT: Tung, Jay
12     APPLICANT: Wang, Shuwen
13     APPLICANT: McConlogue, Lisa
14     TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
15     TITLE OF INVENTION: Methods
16     FILE REFERENCE: 228-US-NEWC2
17     CURRENT APPLICATION NUMBER: US/09/724,566A
18     CURRENT FILING DATE: 2000-11-28
19     PRIOR APPLICATION NUMBER: US 09/501,708
20     PRIOR FILING DATE: 2000-02-10
21     PRIOR APPLICATION NUMBER: 60/119,571
22     PRIOR FILING DATE: 1999-02-10
23     PRIOR APPLICATION NUMBER: 60/139,172
24     PRIOR FILING DATE: 1999-06-15
25     NUMBER OF SEQ ID NOS: 104
26     SOFTWARE: FastSeq for Windows Version 4.0
27     SEQ ID NO 68
28     LENGTH: 395
29     TYPE: PRT
30     ORGANISM: Homo sapiens
31     US-09-724-566A-68
32
33     Query Match      21.2%, Score 22; DB 1; Length 395;
34     Best Local Similarity 31.2%; Pred.No. 1.9e+02;
35     Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0
36
37     Oy      25 GIRLPKSGGAPLG 40
38             | : : | |
39     Db      70 GVVVPYTGKWEGLG 85
40
41     RESULT 165
42     US-09-471-669A-68
43     Sequence 68, Application US/09471669A
44     Patent No. 6830918
45     GENERAL INFORMATION:
46     APPLICANT: Anderson, John P.
47     APPLICANT: Baai, Gurigbal
48     APPLICANT: Doane, Minh Tam
49     APPLICANT: Frisgon, No. 6830918mand
50     APPLICANT: John, Varghese
51     APPLICANT: Power, Michael
52     APPLICANT: Sinha, Sukanto
53     APPLICANT: Tatsuno, Gwen
54     APPLICANT: Tung, Jay
55     APPLICANT: Wang, Shuwen
56     APPLICANT: McConlogue, Lisa
57     APPLICANT: Eilan Pharmaceuticals, Inc.
58     TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
59     FILE REFERENCE: 015270-006430US
60     CURRENT APPLICATION NUMBER: US/09/471,669A
61     CURRENT FILING DATE: 1999-12-24
62     PRIOR APPLICATION NUMBER: US 60/114,408
63     PRIOR FILING DATE: 1998-12-31
64     PRIOR APPLICATION NUMBER: US 60/119,571
65     PRIOR FILING DATE: 1999-02-10
66     PRIOR APPLICATION NUMBER: US 60/139,172
67     PRIOR FILING DATE: 1999-06-15
68     NUMBER OF SEQ ID NOS: 108
69     SOFTWARE: PatentIn Ver. 2.1
70     SEQ ID NO 68
71     LENGTH: 395
72     TYPE: PRT

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```
/ ORGANISM: Homo sapiens
US-09-471-669A-68

Query Match      21.2%; Score 22; DB 1; Length 395;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      78 GVVVPTYGKWEGLG 85

RESULT 166
US-09-471-669A-106
/ Sequence 106, Application US/09471669A
/ Patent No. 6830918
/ GENERAL INFORMATION:
/ APPLICANT: Anderson, John P.
/ APPLICANT: Basi, Guridpal
/ APPLICANT: Doane, Minh Tam
/ APPLICANT: Frigon, No. 6830918mand
/ APPLICANT: John, Varghese
/ APPLICANT: Power, Michael
/ APPLICANT: Sinha, Sukanto
/ APPLICANT: Tatsuno, Gwen
/ APPLICANT: Tung, Jay
/ APPLICANT: Wang, Shuwen
/ APPLICANT: McConlogue, Lisa
/ APPLICANT: Elan Pharmaceuticals, Inc.
/ TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
/ FILE REFERENCE: 015270-006430US
/ CURRENT APPLICATION NUMBER: US/09/471,669A
/ PRIOR FILING DATE: 1999-12-24
/ PRIOR APPLICATION NUMBER: US 60/114,408
/ PRIOR FILING DATE: 1998-12-31
/ PRIOR APPLICATION NUMBER: US 60/119,571
/ PRIOR FILING DATE: 1999-02-10
/ PRIOR APPLICATION NUMBER: US 60/139,172
/ PRIOR FILING DATE: 1999-06-15
/ NUMBER OF SEQ ID NOS: 108
/ SOFTWARE: PatentIn Ver. 2.1
/ SEQ ID NO 106
/ LENGTH: 401
/ TYPE: PRT
/ ORGANISM: Mus sp.
/ FEATURE:
/ OTHER INFORMATION: pbs/Mulimpain E17 #14 construct
US-09-471-669A-106

Query Match      21.2%; Score 22; DB 1; Length 401;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      78 GVVVPTYGKWEGLG 93

RESULT 167
US-09-724-566A-58
/ Sequence 58, Application US/09724566A
/ Patent No. 6627739
/ GENERAL INFORMATION:
/ APPLICANT: Anderson, John P.
/ APPLICANT: Basi, Guridpal
/ APPLICANT: Doane, Minh Tam
/ APPLICANT: Frigon, No. 6627739mand
/ APPLICANT: John, Varghese
/ APPLICANT: Power, Michael
/ APPLICANT: Sinha, Sukanto
/ APPLICANT: Tatsuno, Gwen
/ APPLICANT: Tung, Jay
/ APPLICANT: Wang, Shuwen
```

```
/ APPLICANT: McConlogue, Lisa
/ TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
/ FILE REFERENCE: 228-US-NEWC2
/ CURRENT APPLICATION NUMBER: US/09/724,566A
/ PRIOR FILING DATE: 2000-11-28
/ PRIOR APPLICATION NUMBER: US 09/501,708
/ PRIOR FILING DATE: 2000-02-10
/ PRIOR APPLICATION NUMBER: 60/119,571
/ PRIOR FILING DATE: 1999-02-10
/ PRIOR APPLICATION NUMBER: 60/139,172
/ PRIOR FILING DATE: 1999-06-15
/ NUMBER OF SEQ ID NOS: 104
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 58
/ LENGTH: 407
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-724-566A-58

Query Match      21.2%; Score 22; DB 1; Length 407;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      82 GVVVPTYGKWEGLG 97

RESULT 168
US-09-471-669A-58
/ Sequence 58, Application US/09471669A
/ Patent No. 6830918
/ GENERAL INFORMATION:
/ APPLICANT: Anderson, John P.
/ APPLICANT: Basi, Guridpal
/ APPLICANT: Doane, Minh Tam
/ APPLICANT: Frigon, No. 6830918mand
/ APPLICANT: John, Varghese
/ APPLICANT: Power, Michael
/ APPLICANT: Sinha, Sukanto
/ APPLICANT: Tatsuno, Gwen
/ APPLICANT: Tung, Jay
/ APPLICANT: Wang, Shuwen
/ APPLICANT: McConlogue, Lisa
/ TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
/ FILE REFERENCE: 015270-006430US
/ CURRENT APPLICATION NUMBER: US/09/471,669A
/ PRIOR FILING DATE: 1999-12-24
/ PRIOR APPLICATION NUMBER: US 60/114,408
/ PRIOR FILING DATE: 1998-12-31
/ PRIOR APPLICATION NUMBER: US 60/119,571
/ PRIOR FILING DATE: 1999-02-10
/ PRIOR APPLICATION NUMBER: US 60/139,172
/ PRIOR FILING DATE: 1999-06-15
/ NUMBER OF SEQ ID NOS: 108
/ SOFTWARE: PatentIn Ver. 2.1
/ SEQ ID NO 58
/ LENGTH: 407
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-471-669A-58

Query Match      21.2%; Score 22; DB 1; Length 407;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      82 GVVVPTYGKWEGLG 97
```



```

RESULT 169
US-09-471-669A-105
: Sequence 105, Application US/09471669A
: Patent No. 6630918
: GENERAL INFORMATION:
: APPLICANT: Anderson, John P.
: APPLICANT: Basl, Guripal
: APPLICANT: Doane, Minh Tam
: APPLICANT: Frigon, No. 6630918mand
: APPLICANT: John, Varghese
: APPLICANT: Power, Michael
: APPLICANT: Sinha, Sukanto
: APPLICANT: Tatsuno, Gwen
: APPLICANT: Tung, Jay
: APPLICANT: Wang, Shuwen
: APPLICANT: McConlogue, Lisa
: APPLICANT: Elian Pharmaceuticals, Inc.
: TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
: FILE REFERENCE: 015270-006430US
: CURRENT APPLICATION NUMBER: US/09/471,669A
: CURRENT FILING DATE: 1999-12-24
: PRIOR APPLICATION NUMBER: US 60/114,408
: PRIOR FILING DATE: 1998-12-31
: PRIOR APPLICATION NUMBER: US 60/119,571
: PRIOR FILING DATE: 1999-02-10
: PRIOR APPLICATION NUMBER: US 60/139,172
: PRIOR FILING DATE: 1999-06-15
: NUMBER OF SEQ ID NOS: 108
: SOFTWARE: PatentIn Ver. 2.1
: SEQ ID NO 105
: LENGTH: 408
: TYPE: PRT
: ORGANISM: Mus sp.
: FEATURE:
: OTHER INFORMATION: PBS/MuImpain E17 #11 construct
US-09-471-669A-105

Query Match      21.2%; Score 22; DB 1; Length 408;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY      25 GIRLPURSGLGAGPLG 40
      ||:|:|:|:|
Db      80 GVVYPYQGKWEGLG 95

RESULT 170
US-09-548-372D-28
: Sequence 28, Application US/09548372D
: Patent No. 6420534
: GENERAL INFORMATION:
: APPLICANT: CURANEY ET AL.
: TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
: FILE REFERENCE: 29915/62801
: CURRENT APPLICATION NUMBER: US/09/548,372D
: CURRENT FILING DATE: 2000-04-12
: PRIOR APPLICATION NUMBER: US 60/155,493
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: US 09/404,133
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: PCT/US99/20881
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: US 60/101,594
: PRIOR FILING DATE: 1998-09-24
: NUMBER OF SEQ ID NOS: 73
: SOFTWARE: PatentIn version 3.1
: SEQ ID NO 28
: LENGTH: 425
: TYPE: PRT
: ORGANISM: Homo sapiens
US-09-548-372D-28

```

```

Query Match      21.2%; Score 22; DB 1; Length 425;
Beet Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches      5; Conservative      2; Mismatches      9; Indels      0; Gaps      0;

OY          25 GIRLPLRSGLGAPLG 40
| : | | | | |
DB          99 GVVVPEYTGKMEGELG 114

RESULT 171
US-09-548-367D-28
; Sequence 28, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GRANEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRF
; ORGANISM: Homo sapiens
US-09-548-367D-28

Query Match      21.2%; Score 22; DB 1; Length 425;
Beet Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches      5; Conservative      2; Mismatches      9; Indels      0; Gaps      0;

OY          25 GIRLPLRSGLGAPLG 40
| : | | | | |
DB          99 GVVVPEYTGKMEGELG 114

RESULT 172
US-09-551-853D-28
; Sequence 28, Application US/09551853D
; Patent No. 6500657
; GENERAL INFORMATION:
; APPLICANT: GRANEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT APPLICATION NUMBER: US/09/551,853D
; PRIOR FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRF
; ORGANISM: Homo sapiens
US-09-551-853D-28

Query Match      21.2%; Score 22; DB 1; Length 425;
Beet Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches      5; Conservative      2; Mismatches      9; Indels      0; Gaps      0;

OY          25 GIRLPLRSGLGAPLG 40
| : | | | | |
DB          99 GVVVPEYTGKMEGELG 114

```

Best Local Similarity 31.2%; Pred. No. 1.9e+02;  
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy 25 GIRLPLRSGLGAPLG 40  
| : | | |  
Db 99 GVVVPYTGKMEGELG 114

## RESULT 173

US-09-416-901B-28  
; Sequence 28, Application US/09416901B  
; Patent No. 669671  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280A  
; CURRENT APPLICATION NUMBER: US/09/416,901B  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 72  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 28  
; LENGTH: 425  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-416-901B-28

Query Match 21.2%; Score 22; DB 1; Length 425;  
Best Local Similarity 31.2%; Pred. No. 1.9e+02;

Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy 25 GIRLPLRSGLGAPLG 40  
| : | | |  
Db 99 GVVVPYTGKMEGELG 114

## RESULT 174

US-09-548-376D-28  
; Sequence 28, Application US/09548376D  
; Patent No. 6706485  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
; TITLE OF INVENTION: AND USES  
; FILE REFERENCE: 29915/6280F  
; CURRENT APPLICATION NUMBER: US/09/548,376D  
; PRIOR FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 28  
; LENGTH: 425  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-376D-28

Query Match 21.2%; Score 22; DB 1; Length 425;

Best Local Similarity 31.2%; Pred. No. 1.9e+02;  
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy 25 GIRLPLRSGLGAPLG 40  
| : | | |  
Db 99 GVVVPYTGKMEGELG 114

## RESULT 175

US-09-794-927A-28  
; Sequence 28, Application US/09794927A  
; Patent No. 6727074  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280RG  
; CURRENT APPLICATION NUMBER: US/09/794,927A  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 28  
; LENGTH: 425  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-794-927A-28

Query Match 21.2%; Score 22; DB 1; Length 425;  
Best Local Similarity 31.2%; Pred. No. 1.9e+02;

Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy 25 GIRLPLRSGLGAPLG 40  
| : | | |  
Db 99 GVVVPYTGKMEGELG 114

## RESULT 176

US-09-548-373D-28  
; Sequence 28, Application US/09548373D  
; Patent No. 6737510  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; TITLE OF INVENTION: THEREOF  
; FILE REFERENCE: 29915/6280B  
; CURRENT APPLICATION NUMBER: US/09/548,373D  
; PRIOR FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 28  
; LENGTH: 425  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-373D-28

```
Query Match          21.2% Score 22; DB 1; Length 425;
Best Local Similarity 31.2% Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy      25 GIRLPLRSGLCGAPLG 40
      | : | | | | | | | |
Db      99 GVVVPYTGKWEGLG 114

RESULT 177
US-09-795-847B-28
; Sequence 28, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280E
; CURRENT APPLICATION NUMBER: US/09/795,847B
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-795-847B-28

Query Match          21.2% Score 22; DB 1; Length 425;
Best Local Similarity 31.2% Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy      25 GIRLPLRSGLCGAPLG 40
      | : | | | | | | | |
Db      99 GVVVPYTGKWEGLG 114

RESULT 178
US-09-869-414-28
; Sequence 28, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Belkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; PRIOR FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patent In Ver. 2.0
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; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-869-414-28

Query Match          21.2% Score 22; DB 1; Length 425;
Best Local Similarity 31.2% Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy      25 GIRLPLRSGLCGAPLG 40
      | : | | | | | | | |
Db      99 GVVVPYTGKWEGLG 114

RESULT 179
US-09-548-366F-28
; Sequence 28, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280J
; CURRENT APPLICATION NUMBER: US/09/548,366F
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patent In version 3.1
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-366F-28

Query Match          21.2% Score 22; DB 1; Length 425;
Best Local Similarity 31.2% Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy      25 GIRLPLRSGLCGAPLG 40
      | : | | | | | | | |
Db      99 GVVVPYTGKWEGLG 114

RESULT 180
US-09-548-368D-28
; Sequence 28, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patent In version 3.1
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; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-368D-28
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```
Query Match      21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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```
QY      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      99 GVVVPTYQGKWEGLG 114
```

```
RESULT 181
US-09-794-925A-28
; Sequence 28, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 28915/6280H1
; CURRENT FILING DATE: 2001-02-27
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-925A-28
```

```
Query Match      21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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```
QY      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      99 GVVVPTYQGKWEGLG 114
```

```
RESULT 182
US-09-806-194A-28
; Sequence 28, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Helinski, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.P CP
; CURRENT FILING DATE: 2001-09-17
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 28
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; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-806-194A-28
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Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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Db      99 GVVVPTYQGKWEGLG 114
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US-09-724-566A-69
; Sequence 69, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; FILE REFERENCE: 228-US-NBWC2
; CURRENT FILING DATE: 2000-11-28
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 69
; LENGTH: 439
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-724-566A-69
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Best Local Similarity 31.2%; Pred. No. 1.9e+02;
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Db      65 GVVVPTYQGKWEGLG 80
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; Sequence 69, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Wang, Shuwen
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; APPLICANT: McConlogue, Lisa
; APPLICANT: Elan Pharmaceuticals, Inc.
; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
; FILE REFERENCE: 015270-006430US
; CURRENT APPLICATION NUMBER: US/09/471,669A
; PRIOR FILING DATE: 1999-12-24
; PRIOR APPLICATION NUMBER: US 60/114,408
; PRIOR FILING DATE: 1998-12-31
; PRIOR APPLICATION NUMBER: US 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: US 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 108
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 69
; LENGTH: 439
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-471-669A-69
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Query Match          21.2%; Score 22; DB 1; Length 439;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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Db      65 GVVVPTQKKEGELG 80
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RESULT 185
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; Sequence 67, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; FILE REFERENCE: 228-US-NEWC2
; CURRENT APPLICATION NUMBER: US/09/724,566A
; CURRENT FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 67
; LENGTH: 444
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-724-566A-67
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Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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Db      70 GVVVPTQKKEGELG 85
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RESULT 186
US-09-471-669A-67
; Sequence 67, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; APPLICANT: Elan Pharmaceuticals, Inc.
; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
; FILE REFERENCE: 015270-006430US
; CURRENT APPLICATION NUMBER: US/09/471,669A
; CURRENT FILING DATE: 1999-12-24
; PRIOR APPLICATION NUMBER: US 60/114,408
; PRIOR FILING DATE: 1998-12-31
; PRIOR APPLICATION NUMBER: US 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: US 60/139,172
; NUMBER OF SEQ ID NOS: 108
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 67
; LENGTH: 444
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-471-669A-67
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Query Match          21.2%; Score 22; DB 1; Length 444;
Best Local Similarity 31.2%; Pred. No. 1.9e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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      | : | | | | |
Db      70 GVVVPTQKKEGELG 85
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RESULT 187
US-09-724-566A-43
; Sequence 43, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; FILE REFERENCE: 228-US-NEWC2
; CURRENT APPLICATION NUMBER: US/09/724,566A
; CURRENT FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: FastSeq for Windows Version 4.0
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Job time : 2 secs

GenCore version 5.1.6  
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## OM protein - protein search, using sw model

Run on: August 3, 2005, 11:50:12 ; Search time 1 Seconds  
(without alignments)  
2.122 Million cell updates/sec

Title: us-10-726-967a-1  
Perfect score: 104  
Sequence: 1 TQHCIRPLRSGCGAPLGL 20

Scoring table: BLOSUM62  
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Searched: 230 seqs, 106093 residues

Total number of hits satisfying chosen parameters: 230

Minimum DB seq length: 0  
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Post-processing: Minimum Match 0%  
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Listing first 500 summaries

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108	104	100.0	459	1	US-10-940-867-24	Sequence 24, Appl	181	104	100.0	503	1	US-10-820-953-3	Sequence 3, Appl
109	104	100.0	459	1	US-10-940-867-32	Sequence 32, Appl	182	104	100.0	503	1	US-10-773-754-3	Sequence 3, Appl
110	104	100.0	459	1	US-10-477-076-24	Sequence 24, Appl	183	104	100.0	509	1	US-10-275-339A-7	Sequence 7, Appl
111	104	100.0	459	1	US-10-477-076-32	Sequence 32, Appl	184	77	74.0	501	1	US-09-794-827-8	Sequence 8, Appl
112	104	100.0	460	1	US-10-627-473-18	Sequence 18, Appl	185	77	74.0	501	1	US-09-795-847-8	Sequence 8, Appl
113	104	100.0	461	1	US-10-627-473-4	Sequence 4, Appl	186	77	74.0	501	1	US-09-794-743-8	Sequence 8, Appl
114	104	100.0	461	1	US-10-627-473-12	Sequence 12, Appl	187	77	74.0	501	1	US-09-794-743-8	Sequence 8, Appl
115	104	100.0	461	1	US-10-627-473-16	Sequence 16, Appl	188	77	74.0	501	1	US-09-794-743-8	Sequence 8, Appl
116	104	100.0	476	1	US-09-794-927-6	Sequence 6, Appl	189	77	74.0	501	1	US-09-681-442-8	Sequence 8, Appl
117	104	100.0	476	1	US-09-795-847-6	Sequence 6, Appl	190	77	74.0	501	1	US-09-681-442-8	Sequence 8, Appl
118	104	100.0	476	1	US-09-794-743-6	Sequence 6, Appl	191	77	74.0	501	1	US-09-681-442-8	Sequence 8, Appl
119	104	100.0	476	1	US-09-794-748-6	Sequence 6, Appl	192	77	74.0	501	1	US-09-548-366-8	Sequence 8, Appl
120	104	100.0	476	1	US-09-794-925-6	Sequence 6, Appl	193	77	74.0	501	1	US-10-652-827-8	Sequence 8, Appl
121	104	100.0	476	1	US-09-681-442-6	Sequence 6, Appl	194	77	74.0	501	1	US-10-652-830-8	Sequence 8, Appl
122	104	100.0	476	1	US-09-808-943A-4	Sequence 4, Appl	195	77	74.0	501	1	US-10-652-830-8	Sequence 8, Appl
123	104	100.0	476	1	US-09-869-414-6	Sequence 6, Appl	196	77	74.0	501	1	US-10-476-935-8	Sequence 8, Appl
124	104	100.0	476	1	US-09-548-366-6	Sequence 6, Appl	197	77	74.0	501	1	US-10-940-867-8	Sequence 8, Appl
125	104	100.0	476	1	US-10-652-927-6	Sequence 6, Appl	198	77	74.0	501	1	US-10-477-076-8	Sequence 8, Appl
126	104	100.0	476	1	US-10-652-830-6	Sequence 6, Appl	199	22	21.2	358	1	US-10-872-198-12	Sequence 8, Appl
127	104	100.0	476	1	US-10-652-830-6	Sequence 6, Appl	200	22	21.2	358	1	US-10-872-197A-12	Sequence 8, Appl
128	104	100.0	476	1	US-10-476-935-6	Sequence 6, Appl	201	22	21.2	391	1	US-10-372-473-4	Sequence 12, Appl
129	104	100.0	476	1	US-10-801-487-4	Sequence 6, Appl	202	22	21.2	403	1	US-10-400-273-4	Sequence 4, Appl
130	104	100.0	476	1	US-10-801-509-4	Sequence 4, Appl	203	22	21.2	406	1	US-10-837-021A-2	Sequence 2, Appl
131	104	100.0	476	1	US-10-801-509-4	Sequence 4, Appl	204	22	21.2	406	1	US-10-837-021A-4	Sequence 4, Appl
132	104	100.0	476	1	US-10-940-867-6	Sequence 6, Appl	205	22	21.2	406	1	US-10-837-021A-5	Sequence 2, Appl
133	104	100.0	476	1	US-10-940-867-6	Sequence 6, Appl	206	22	21.2	406	1	US-10-837-021A-5	Sequence 4, Appl
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135	104	100.0	476	1	US-10-801-493-4	Sequence 6, Appl	208	22	21.2	411	1	US-10-400-273-5	Sequence 5, Appl
136	104	100.0	488	1	US-09-796-264-2	Sequence 4, Appl	209	22	21.2	411	1	US-10-627-473-19	Sequence 19, Appl
137	104	100.0	488	1	US-09-796-264-2	Sequence 4, Appl	210	22	21.2	414	1	US-10-627-473-20	Sequence 20, Appl
138	104	100.0	488	1	US-09-845-226-2	Sequence 2, Appl	211	22	21.2	417	1	US-10-81-092-5	Sequence 9, Appl
139	104	100.0	488	1	US-09-795-903A-2	Sequence 2, Appl	212	22	21.2	417	1	US-10-627-473-21	Sequence 21, Appl
140	104	100.0	488	1	US-10-032-818-2	Sequence 2, Appl	213	22	21.2	425	1	US-09-794-927-28	Sequence 28, Appl
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142	104	100.0	501	1	US-09-794-927-2	Sequence 2, Appl	215	22	21.2	425	1	US-09-794-743-28	Sequence 28, Appl
143	104	100.0	501	1	US-09-795-847-4	Sequence 4, Appl	216	22	21.2	425	1	US-09-794-743-28	Sequence 28, Appl
144	104	100.0	501	1	US-09-794-743-4	Sequence 4, Appl	217	22	21.2	425	1	US-09-794-743-28	Sequence 28, Appl
145	104	100.0	501	1	US-09-794-748-4	Sequence 4, Appl	218	22	21.2	425	1	US-09-794-748-28	Sequence 28, Appl
146	104	100.0	501	1	US-09-794-925-4	Sequence 4, Appl	219	22	21.2	425	1	US-09-681-442-28	Sequence 28, Appl
147	104	100.0	501	1	US-09-681-442-4	Sequence 4, Appl	220	22	21.2	425	1	US-09-681-442-28	Sequence 28, Appl
148	104	100.0	501	1	US-09-908-943A-2	Sequence 2, Appl	221	22	21.2	425	1	US-09-548-366-28	Sequence 28, Appl
149	104	100.0	501	1	US-09-908-943A-2	Sequence 2, Appl	222	22	21.2	425	1	US-10-652-830-28	Sequence 28, Appl
150	104	100.0	501	1	US-09-869-414-4	Sequence 4, Appl	223	22	21.2	425	1	US-10-652-830-28	Sequence 28, Appl
151	104	100.0	501	1	US-09-548-366-4	Sequence 4, Appl	224	22	21.2	425	1	US-10-652-830-28	Sequence 28, Appl
152	104	100.0	501	1	US-10-032-818-4	Sequence 4, Appl	225	22	21.2	425	1	US-10-476-935-28	Sequence 28, Appl
153	104	100.0	501	1	US-10-214-932-104	Sequence 104, App	226	22	21.2	440	1	US-10-872-198-139	Sequence 28, Appl
154	104	100.0	501	1	US-10-308-365-2	Sequence 2, Appl	227	22	21.2	774	1	US-10-872-198-139	Sequence 28, Appl
155	104	100.0	501	1	US-10-372-730-9	Sequence 9, Appl	228	22	21.2	774	1	US-09-969-671A-4	Sequence 4, Appl
156	104	100.0	501	1	US-10-372-730-9	Sequence 9, Appl	229	22	21.2	774	1	US-10-308-365-4	Sequence 4, Appl
157	104	100.0	501	1	US-10-652-927-4	Sequence 4, Appl	230	14	13.5	28	1	US-10-829-717-4	Sequence 4, Appl
158	104	100.0	501	1	US-10-652-927-4	Sequence 4, Appl						US-10-726-967A-52	Sequence 52, Appl
159	104	100.0	501	1	US-10-281-092-6	Sequence 6, Appl							
160	104	100.0	501	1	US-10-281-092-6	Sequence 6, Appl							
161	104	100.0	501	1	US-10-466-258-2	Sequence 2, Appl							
162	104	100.0	501	1	US-10-223-837-1	Sequence 1, Appl							
163	104	100.0	501	1	US-10-652-045-4	Sequence 4, Appl							
164	104	100.0	501	1	US-10-343-389A-19	Sequence 19, Appl							
165	104	100.0	501	1	US-10-476-935-4	Sequence 4, Appl							
166	104	100.0	501	1	US-10-801-487-2	Sequence 2, Appl							
167	104	100.0	501	1	US-10-723-860-285	Sequence 285, App							
168	104	100.0	501	1	US-10-801-938-2	Sequence 2, Appl							
169	104	100.0	501	1	US-10-801-509-2	Sequence 2, Appl							
170	104	100.0	501	1	US-10-801-486-2	Sequence 2, Appl							
171	104	100.0	501	1	US-10-837-021A-1	Sequence 1, Appl							
172	104	100.0	501	1	US-10-940-867-4	Sequence 4, Appl							
173	104	100.0	501	1	US-10-940-867-4	Sequence 4, Appl							
174	104	100.0	501	1	US-10-477-076-4	Sequence 4, Appl							
175	104	100.0	501	1	US-10-829-717-2	Sequence 2, Appl							
176	104	100.0	501	1	US-10-829-717-2	Sequence 2, Appl							
177	104	100.0	503	1	US-10-466-391A-2	Sequence 2, Appl							
178	104	100.0	503	1	US-09-796-264-3	Sequence 3, Appl							
179	104	100.0	503	1	US-09-845-226-3	Sequence 3, Appl							
					US-09-795-903A-3	Sequence 3, Appl							

## ALIGNMENTS

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RESULT 1
US-10-372-473-3
; Sequence 3, Application US/10372473
; Publication No. US20040005691A1
; GENERAL INFORMATION:
; APPLICANT: Chou, Kuo-Chen
; APPLICANT: Howe, W. Jeffery
; TITLE OF INVENTION: Modified BACE
; FILE REFERENCE: MBHB 01-1766-A
; CURRENT APPLICATION NUMBER: US/10/372,473
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 3
; LENGTH: 425
; TYPE: prt
; ORGANISM: Homo sapiens
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FEATURE:
; NAME/KEY: MISC FEATURE
; OTHER INFORMATION: Human beta-secretase zymogen.
US-10-372-473-3

Query Match      100.0%; Score 104; DB 1; Length 425;
Best Local Similarity 100.0%; Pred. No. 37;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLSGLGCAPIGL 41
      |||||||
Db      1 TQHGIRLPRLSGLGCAPIGL 20

RESULT 2
US-09-794-927-51
; Sequence 51, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280FG
; CURRENT FILING DATE: 2001-02-27
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/416,901,
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 51
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
; OTHER INFORMATION: delta TM
US-09-794-927-51

Query Match      100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLSGLGCAPIGL 41
      |||||||
Db      22 TQHGIRLPRLSGLGCAPIGL 41

RESULT 3
US-09-795-847-51
; Sequence 51, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; TITLE OF INVENTION: THEREFOR
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FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 51
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
; OTHER INFORMATION: delta TM
US-09-795-847-51

Query Match      100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLSGLGCAPIGL 41
      |||||||
Db      22 TQHGIRLPRLSGLGCAPIGL 41

RESULT 4
US-09-794-743-51
; Sequence 51, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280BC
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 51
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
; OTHER INFORMATION: delta TM
US-09-794-743-51

Query Match      100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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GENERAL INFORMATION:  
APPLICANT: Belkowskí et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/6280M  
CURRENT APPLICATION NUMBER: US/09/869,414  
CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 51  
LENGTH: 428  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2 (b)  
US-09-869-414-51

Query Match 100.0%; Score 104; DB 1; Length 428;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLSGCGAPLGL 41  
DB 22 TQHGIRLPRLSGCGAPLGL 41

RESULT 9  
US-09-548-366-51  
Sequence 51, Application US/09548366  
Publication No. US20030104365A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES THEREFOR  
FILE REFERENCE: 28341/6280A  
CURRENT APPLICATION NUMBER: US/09/548,366  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 65  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 51  
LENGTH: 428  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2 (b)  
US-09-548-366-51

Query Match 100.0%; Score 104; DB 1; Length 428;  
Best Local Similarity 100.0%; Pred. No. 38;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 22 TQHGIRLPRLSGCGAPLGL 41  
DB 22 TQHGIRLPRLSGCGAPLGL 41

RESULT 10  
US-10-652-927-51  
Sequence 51, Application US/10652927  
Publication No. US20040043408A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
TITLE OF INVENTION: Therefor  
FILE REFERENCE: 29915/6280N3  
CURRENT APPLICATION NUMBER: US/10/652,927  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 51  
LENGTH: 428  
TYPE: PRT  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Aap2 (b) delta TM  
US-10-652-927-51

Query Match 100.0%; Score 104; DB 1; Length 428;  
Best Local Similarity 100.0%; Pred. No. 38;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLSGCGAPLGL 41  
DB 22 TQHGIRLPRLSGCGAPLGL 41

RESULT 11  
US-10-652-830-51  
Sequence 51, Application US/10652830  
Publication No. US20040048303A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
TITLE OF INVENTION: Therefor  
FILE REFERENCE: 29915/6280N1  
CURRENT APPLICATION NUMBER: US/10/652,830  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74

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/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 51
/ LENGTH: 428
/ TYPE: PRT
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Hu-Asp2(b) delta TM
US-10-652-830-51

Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 12
US-10-652-045-51
/ Sequence 51, Application US/10652045
/ Publication No. US20040166507A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N2
/ CURRENT APPLICATION NUMBER: US/10/652,045
/ PRIOR FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 51
/ LENGTH: 428
/ TYPE: PRT
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Hu-Asp2(b) delta TM
US-10-652-045-51

Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 13
US-10-476-935-51
/ Sequence 51, Application US/10476935
/ Publication No. US20040234976A1
/ GENERAL INFORMATION:
/ APPLICANT: Beinkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M1
/ CURRENT APPLICATION NUMBER: US/10/476,935
/ PRIOR FILING DATE: 2003-11-06
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
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/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 51
/ LENGTH: 428
/ TYPE: PRT
/ ORGANISM: Artificial Sequence
/ FEATURE:
/ OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)
US-10-477-076-51

Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 14
US-10-477-076-51
/ Sequence 51, Application US/10477076
/ Publication No. US20050080222A1
/ GENERAL INFORMATION:
/ APPLICANT: Beinkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M2
/ CURRENT APPLICATION NUMBER: US/10/477,076
/ PRIOR FILING DATE: 2003-11-06
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 51
/ LENGTH: 428
/ TYPE: PRT
/ ORGANISM: Artificial Sequence
/ FEATURE:
/ OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)
US-10-477-076-51

Query Match          100.0%; Score 104; DB 1; Length 428;
Best Local Similarity 100.0%; Pred. No. 38;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 15
US-10-372-473-2
/ Sequence 2, Application US/10372473
/ Publication No. US20040005691A1
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; GENERAL INFORMATION:
; APPLICANT: Chou, Kuo-Chen
; TITLE OF INVENTION: Modified BACE
; FILE REFERENCE: MBHB 01-1766-A
; CURRENT APPLICATION NUMBER: US/10/372,473
; CURRENT FILING DATE: 2003-02-21
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: Patentin version 3.2
; SEQ ID NO 2
; LENGTH: 432
; TYPE: PRT
; ORGANISM: Homo sapiens
; NAME/KEY: MISC_FEATURE
; OTHER INFORMATION: Amino acid sequence of human BACE with P33K mutation.
US-10-372-473-2

Query Match          100.0%; Score 104; DB 1; Length 432;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy      22 TQHGIRLPKRSGLGAPLGL 41
      |||||
Db      1 TQHGIRLPKRSGLGAPLGL 20

RESULT 16
US-09-794-927-26
; Sequence 26, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-927-26

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy      22 TQHGIRLPKRSGLGAPLGL 41
      |||||
Db      1 TQHGIRLPKRSGLGAPLGL 20

RESULT 17
US-09-795-847-26
; Sequence 26, Application US/09795847
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; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-795-847-26

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy      22 TQHGIRLPKRSGLGAPLGL 41
      |||||
Db      2 TQHGIRLPKRSGLGAPLGL 21

RESULT 18
US-09-794-743-26
; Sequence 26, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-743-26
```

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 39;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPRLRSGLGAPLGL 41  
Db 2 T0HGIRLPRLRSGLGAPLGL 21

## RESULT 19

US-09-794-748-26  
Sequence 26, Application US/09794748  
Patent No. US20020037315A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280JL  
CURRENT APPLICATION NUMBER: US/09/794,748  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 26  
LENGTH: 433  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-794-748-26

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 39;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPRLRSGLGAPLGL 41  
Db 2 T0HGIRLPRLRSGLGAPLGL 21

## RESULT 20

US-09-794-925-26  
Sequence 26, Application US/09794925  
Patent No. US20020064819A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/6280H1  
CURRENT APPLICATION NUMBER: US/09/794,925  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 26  
LENGTH: 433  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-794-925-26

## Query Match

100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 39;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPRLRSGLGAPLGL 41  
Db 2 T0HGIRLPRLRSGLGAPLGL 21

## RESULT 21

US-09-681-442-26  
Sequence 26, Application US/09681442  
Patent No. US20020081634A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/6280FG  
CURRENT APPLICATION NUMBER: US/09/681,442  
CURRENT FILING DATE: 2001-04-05  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 26  
LENGTH: 433  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-681-442-26

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 39;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPRLRSGLGAPLGL 41  
Db 2 T0HGIRLPRLRSGLGAPLGL 21

## RESULT 22

US-09-869-414-26  
Sequence 26, Application US/09869414  
Publication No. US20030077226A1  
GENERAL INFORMATION:  
APPLICANT: Bienkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/6280W

```

; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-869-414-26
```

```

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TONGIRLPLRSGLGAPLGL 41
Db      2 TONGIRLPLRSGLGAPLGL 21
```

```

RESULT 23
US-09-548-366-26
; Sequence 26, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-366-26
```

```

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TONGIRLPLRSGLGAPLGL 41
Db      2 TONGIRLPLRSGLGAPLGL 21
```

```

RESULT 24
US-10-652-927-26
; Sequence 26, Application US/10652927
; Publication No. US20040043408A1
```

```

; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N3
; CURRENT APPLICATION NUMBER: US/10/652,927
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-652-927-26
```

```

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TONGIRLPLRSGLGAPLGL 41
Db      2 TONGIRLPLRSGLGAPLGL 21
```

```

RESULT 25
US-10-652-830-26
; Sequence 26, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-652-830-26
```

```

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TONGIRLPLRSGLGAPLGL 41
```

Db 2 TOHGIRLPLRSGLGAPLGL 21

RESULT 26

US-10-652-045-26  
; Sequence 26, Application US/10652045  
; Publication No. US20040166507A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; TITLE OF INVENTION: Therefor  
; FILE REFERENCE: 29915/6280N2  
; CURRENT APPLICATION NUMBER: US/10/652,045  
; PRIOR FILING DATE: 2003-08-29  
; PRIOR APPLICATION NUMBER: 09/794,925  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1998-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 26  
; LENGTH: 433  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-652-045-26

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 39;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41

Db 2 TOHGIRLPLRSGLGAPLGL 21

RESULT 27

US-10-476-935-26  
; Sequence 26, Application US/10476935  
; Publication No. US20040234976A1  
; GENERAL INFORMATION:  
; APPLICANT: Beinkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/6280M1  
; CURRENT APPLICATION NUMBER: US/10/476,935  
; PRIOR FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 26  
; LENGTH: 433  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-476-935-26

Query Match 100.0%; Score 104; DB 1; Length 433;

Best Local Similarity 100.0%; Pred. No. 39;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41

Db 2 TOHGIRLPLRSGLGAPLGL 21

RESULT 28

US-10-940-867-26  
; Sequence 26, Application US/10940867  
; Publication No. US20050026255A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Rigiang  
; TITLE OF INVENTION: Alzheimer's Disease Secretase  
; TITLE OF INVENTION: Alzheimer's Disease Secretase  
; FILE REFERENCE: 6177.PCPA  
; CURRENT APPLICATION NUMBER: US/10/940,867  
; PRIOR FILING DATE: 2004-09-14  
; PRIOR APPLICATION NUMBER: US 09/806,194  
; PRIOR FILING DATE: 2001-03-26  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 49  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 26  
; LENGTH: 433  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-940-867-26

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 39;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41

Db 2 TOHGIRLPLRSGLGAPLGL 21

RESULT 29

US-10-726-967A-78  
; Sequence 78, Application US/10726967A  
; Publication No. US20050074456A1  
; GENERAL INFORMATION:  
; APPLICANT: Ballinger, Marcus  
; TITLE OF INVENTION: Constructs for Homogenously Processed Preparations of Beta Stre  
; TITLE OF INVENTION: App-Cleaving Enzyme  
; FILE REFERENCE: 2004345-0021  
; CURRENT APPLICATION NUMBER: US/10/726,967A  
; PRIOR FILING DATE: 2003-12-02  
; NUMBER OF SEQ ID NOS: 110  
; SOFTWARE: PatentIn version 3.2  
; SEQ ID NO 78  
; LENGTH: 433  
; TYPE: PRT  
; ORGANISM: Artificial  
; FEATURE:  
; OTHER INFORMATION: Soluble human PROBACE1 containing an engineered RFLP site  
US-10-726-967A-78

Query Match 100.0%; Score 104; DB 1; Length 433;  
Best Local Similarity 100.0%; Pred. No. 39;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41

Db 1 TOHGIRLPLRSGLGAPLGL 20



```
RESULT 30
US-10-726-967A-81
; Sequence 81, Application US/10726967A
; Publication No. US20050074456A1
; GENERAL INFORMATION:
; APPLICANT: Ballinger, Marcus
; TITLE OF INVENTION: Construct for Homogenously Processed Preparations of Beta Site
; FILE REFERENCE: 2004345-0021
; CURRENT APPLICATION NUMBER: US/10/726,967A
; CURRENT FILING DATE: 2003-12-02
; NUMBER OF SEQ ID NOS: 110
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 81
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Artificial
; OTHER INFORMATION: Soluble human PROBACE1
US-10-726-967A-81

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAGAPLGL 41
Db      1 TQHGIRLPRLRSGLGAGAPLGL 20

RESULT 31
US-10-726-967A-84
; Sequence 84, Application US/10726967A
; Publication No. US20050074456A1
; GENERAL INFORMATION:
; APPLICANT: Ballinger, Marcus
; TITLE OF INVENTION: Construct for Homogenously Processed Preparations of Beta Site
; FILE REFERENCE: 2004345-0021
; CURRENT APPLICATION NUMBER: US/10/726,967A
; CURRENT FILING DATE: 2003-12-02
; NUMBER OF SEQ ID NOS: 110
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 84
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Artificial
; OTHER INFORMATION: Soluble human PROBACE1 containing an engineered E1NL site
; OTHER INFORMATION: starting at position 21
US-10-726-967A-84

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAGAPLGL 41
Db      1 TQHGIRLPRLRSGLGAGAPLGL 20

RESULT 32
US-10-477-076-26
; Sequence 26, Application US/10477076
; Publication No. US20050080232A1
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M2
; CURRENT APPLICATION NUMBER: US/10/477,076
```

```
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-477-076-26

Query Match          100.0%; Score 104; DB 1; Length 433;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAGAPLGL 41
Db      2 TQHGIRLPRLRSGLGAGAPLGL 21

RESULT 33
US-09-794-927-53
; Sequence 53, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-App2 (b)
; OTHER INFORMATION: delta TM
US-09-794-927-53

Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAGAPLGL 41
```

```
RESULT 34
US-09-795-847-53
; Sequence 53, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
US-09-795-847-53

Query Match      100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAGAPLGL 41

RESULT 35
US-09-794-743-53
; Sequence 53, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
```

```
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
US-09-794-743-53

Query Match      100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAGAPLGL 41

RESULT 36
US-09-794-748-53
; Sequence 53, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280JL
; CURRENT APPLICATION NUMBER: US/09/794,748
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)
US-09-794-748-53

Query Match      100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAGAPLGL 41

RESULT 37
US-09-794-925-53
; Sequence 53, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
```

```

; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
; OTHER INFORMATION: delta TM
US-09-794-925-53
```

```

Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```

Qy      22 TQHGIRLPRLRSGLGAPPLGL 41
Db      22 TQHGIRLPRLRSGLGAPPLGL 41
```

```

RESULT 38
US-09-681-442-53
; Sequence 53, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/681,442
; CURRENT FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
; OTHER INFORMATION: delta TM
US-09-681-442-53
```

```

Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```

Qy      22 TQHGIRLPRLRSGLGAPPLGL 41
Db      22 TQHGIRLPRLRSGLGAPPLGL 41
```

```

RESULT 39
US-09-869-414-53
; Sequence 53, Application US/09869414
; Publication No. US20030077226A1
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
; OTHER INFORMATION: delta TM
US-09-869-414-53
```

```

Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```

Qy      22 TQHGIRLPRLRSGLGAPPLGL 41
Db      22 TQHGIRLPRLRSGLGAPPLGL 41
```

```

RESULT 40
US-09-548-366-53
; Sequence 53, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES THEREFOR
; FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
; OTHER INFORMATION: delta TM
US-09-548-366-53
```

```
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Aep2(b)
US-09-548-366-53

Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 41
US-10-652-927-53
; Sequence 53, Application US/10652927
; Publication No. US20040043408A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N3
; CURRENT APPLICATION NUMBER: US/10/652,927
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Aep2(b) delta TM
US-10-652-927-53

Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 42
US-10-652-830-53
; Sequence 53, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
```

```
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Aep2(b) delta TM
US-10-652-830-53

Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 43
US-10-652-045-53
; Sequence 53, Application US/10652045
; Publication No. US2004016507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 53
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Aep2(b) delta TM
US-10-652-045-53
```

```
Query Match          100.0%; Score 104; DB 1; Length 434;
Best Local Similarity 100.0%; Pred. No. 39;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41
```

RESULT 44  
US-10-476-935-53  
; Sequence 53, Application US/10476935  
; Publication No. US20040234976A1  
; GENERAL INFORMATION:  
; APPLICANT: Belkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/6280M1  
; CURRENT APPLICATION NUMBER: US/10/476,935  
; CURRENT FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 53  
; LENGTH: 434  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)  
; OTHER INFORMATION: delta TM  
US-10-476-935-53

Query Match 100.0%; Score 104; DB 1; Length 434;  
Best Local Similarity 100.0%; Pred. No. 39;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPRLRSGLGAPLGL 41  
Db 22 TONGIRLPRLRSGLGAPLGL 41

RESULT 45  
US-10-477-076-53  
; Sequence 53, Application US/10477076  
; Publication No. US20050080232A1  
; GENERAL INFORMATION:  
; APPLICANT: Belkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/6280M2  
; CURRENT APPLICATION NUMBER: US/10/477,076  
; CURRENT FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 53  
; LENGTH: 434  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)  
; OTHER INFORMATION: delta TM  
US-10-477-076-53

Query Match 100.0%; Score 104; DB 1; Length 434;  
Best Local Similarity 100.0%; Pred. No. 39;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 22 TONGIRLPRLRSGLGAPLGL 41  
Db 22 TONGIRLPRLRSGLGAPLGL 41

RESULT 46  
US-10-400-273-2  
; Sequence 2, Application US/10400273  
; Publication No. US20040014194A1  
; GENERAL INFORMATION:  
; APPLICANT: Beyer, Brian  
; APPLICANT: Hammond, Gerald S  
; APPLICANT: Reichert, Paul  
; APPLICANT: Strickland, Corey  
; APPLICANT: Wang, Wenyan  
; APPLICANT: Weber, Patricia C  
; APPLICANT: Wong, Gwendolyn  
; APPLICANT: Zhang, Lili  
; TITLE OF INVENTION: BETA-SECRETASE CRYSTALS AND METHODS FOR PREPARING AND USING THE S.  
; FILE REFERENCE: JBO1531-K-US  
; CURRENT APPLICATION NUMBER: US/10/400,273  
; CURRENT FILING DATE: 2003-03-26  
; PRIOR APPLICATION NUMBER: 60/367,937  
; PRIOR FILING DATE: 2002-03-27  
; NUMBER OF SEQ ID NOS: 5  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 2  
; LENGTH: 435  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-400-273-2

Query Match 100.0%; Score 104; DB 1; Length 435;  
Best Local Similarity 100.0%; Pred. No. 39;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPRLRSGLGAPLGL 41  
Db 1 TONGIRLPRLRSGLGAPLGL 20

RESULT 47  
US-10-726-967A-76  
; Sequence 76, Application US/10726967A  
; Publication No. US20050074456A1  
; GENERAL INFORMATION:  
; APPLICANT: Ballinger, Marcus  
; TITLE OF INVENTION: Constructs for Homogenously Processed Preparations of Beta Site  
; TITLE OF INVENTION: App-Cleaving Enzyme  
; FILE REFERENCE: 2004345-0021  
; CURRENT APPLICATION NUMBER: US/10/726,967A  
; CURRENT FILING DATE: 2003-12-02  
; NUMBER OF SEQ ID NOS: 110  
; SOFTWARE: PatentIn version 3.2  
; SEQ ID NO 76  
; LENGTH: 439  
; TYPE: PRT  
; ORGANISM: Artificial  
; FEATURE:  
; OTHER INFORMATION: Soluble human pro BACE1 with engineered thrombin cleavage site  
; OTHER INFORMATION: starting at position 25  
US-10-726-967A-76

Query Match 100.0%; Score 104; DB 1; Length 439;  
Best Local Similarity 100.0%; Pred. No. 40;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 22 TONGIRLPRLRSGLGAPLGL 41

Db 1 T0HGIRLPLRSGLGAPLGL 20

RESULT 48  
US-09-794-927-22

Sequence 22, Application US/09794927  
Patent No. US20010016324A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinrichson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND

TITLE OF INVENTION: USES

FILE REFERENCE: 28341/6280FC

CURRENT APPLICATION NUMBER: US/09/794,927

CURRENT FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 22

LENGTH: 446

TYPE: PRT

ORGANISM: Homo sapiens

US-09-794-927-22

Query Match 100.0%; Score 104; DB 1; Length 446;

Best Local Similarity 100.0%; Pred. No. 41;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41

Db 15 T0HGIRLPLRSGLGAPLGL 34

RESULT 49  
US-09-795-847-22

Sequence 22, Application US/09795847

Patent No. US20010018208A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinrichson, Robert L.

APPLICANT: Parodi, Luis A.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND

TITLE OF INVENTION: USES

FILE REFERENCE: 28341/6280DE

CURRENT APPLICATION NUMBER: US/09/795,847

CURRENT FILING DATE: 2001-02-28

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 22

LENGTH: 446

TYPE: PRT

ORGANISM: Homo sapiens

US-09-795-847-22

Query Match 100.0%; Score 104; DB 1; Length 446;

Best Local Similarity 100.0%; Pred. No. 41;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41

Db 15 T0HGIRLPLRSGLGAPLGL 34

RESULT 50  
US-09-794-743-22

Sequence 22, Application US/09794743

Patent No. US20010021391A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinrichson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND

TITLE OF INVENTION: USES

FILE REFERENCE: 28341/6280BC

CURRENT APPLICATION NUMBER: US/09/794,743

CURRENT FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 22

LENGTH: 446

TYPE: PRT

ORGANISM: Homo sapiens

US-09-794-743-22

Query Match 100.0%; Score 104; DB 1; Length 446;

Best Local Similarity 100.0%; Pred. No. 41;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 T0HGIRLPLRSGLGAPLGL 41

Db 15 T0HGIRLPLRSGLGAPLGL 34

RESULT 51  
US-09-794-748-22

Sequence 22, Application US/09794748

Patent No. US20020037315A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinrichson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND

TITLE OF INVENTION: USES

TITLE OF INVENTION: THEREFOR

FILE REFERENCE: 28341/6280JL  
; CURRENT APPLICATION NUMBER: US/09/794,748  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 22  
; LENGTH: 446  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-794-748-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 41;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPRLRSGLGAPLGL 41  
DB 15 TONGIRLPRLRSGLGAPLGL 34

## RESULT 52

US-09-794-925-22  
; Sequence 22, Application US/09794925  
; Patent No. US20020064819A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280H1  
; CURRENT APPLICATION NUMBER: US/09/794,925  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 22  
; LENGTH: 446  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-794-925-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 41;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPRLRSGLGAPLGL 41  
DB 15 TONGIRLPRLRSGLGAPLGL 34

## RESULT 53

US-09-681-442-22  
; Sequence 22, Application US/09681442  
; Patent No. US20020081634A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280FG  
; CURRENT APPLICATION NUMBER: US/09/681,442  
; CURRENT FILING DATE: 2001-04-05  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 22  
; LENGTH: 446  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-681-442-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 41;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPRLRSGLGAPLGL 41  
DB 15 TONGIRLPRLRSGLGAPLGL 34

## RESULT 54

US-09-869-414-22  
; Sequence 22, Application US/09869414  
; Publication No. US20030077226A1  
; GENERAL INFORMATION:  
; APPLICANT: Beinowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M  
; CURRENT APPLICATION NUMBER: US/09/869,414  
; CURRENT FILING DATE: 2001-06-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 22  
; LENGTH: 446  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-869-414-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 41;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPRLRSGLGAPLGL 41  
DB 15 TONGIRLPRLRSGLGAPLGL 34

QY 22 TOHGIRLPLRSGLGAPLGL 41  
Db 15 TOHGIRLPLRSGLGAPLGL 34

RESULT 55  
US-10-548-366-22  
; Sequence 22, Application US/09548366  
; Publication No. US20030104365A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrikson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Van, Ridgand  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
; FILE REFERENCE: 28341/6280A  
; CURRENT APPLICATION NUMBER: US/09/548,366  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 22  
; LENGTH: 446  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-366-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 41;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41  
Db 15 TOHGIRLPLRSGLGAPLGL 34

RESULT 56  
US-10-652-927-22  
; Sequence 22, Application US/10652927  
; Publication No. US20040043408A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280N3  
; CURRENT APPLICATION NUMBER: US/10/652,927  
; CURRENT FILING DATE: 2003-08-29  
; PRIOR APPLICATION NUMBER: 09/794,925  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 22  
; LENGTH: 446

; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-652-927-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 41;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41  
Db 15 TOHGIRLPLRSGLGAPLGL 34

RESULT 57  
US-10-652-830-22  
; Sequence 22, Application US/10652830  
; Publication No. US20040048303A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280N1  
; CURRENT APPLICATION NUMBER: US/10/652,830  
; CURRENT FILING DATE: 2003-08-29  
; PRIOR APPLICATION NUMBER: 09/794,925  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 22  
; LENGTH: 446  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-652-830-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 41;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41  
Db 15 TOHGIRLPLRSGLGAPLGL 34

RESULT 58  
US-10-652-045-22  
; Sequence 22, Application US/10652045  
; Publication No. US2004016507A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280N2  
; CURRENT APPLICATION NUMBER: US/10/652,045  
; CURRENT FILING DATE: 2003-08-29  
; PRIOR APPLICATION NUMBER: 09/794,925  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881



;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 74  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 22  
;; LENGTH: 446  
;; TYPE: PRT  
;; ORGANISM: Homo sapiens  
US-10-652-045-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 41;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPFRSGLGAPLGL 41  
DB 15 TQHGIRLPFRSGLGAPLGL 34

RESULT 59  
US-10-476-935-22  
;; Sequence 22, Application US/10476935  
;; Publication No. US20040234976A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Beinkowski et al.  
;; TITLE OF INVENTION: THEREFOR  
;; FILE REFERENCE: 28341/6280M1  
;; CURRENT FILING DATE: 2003-11-06  
;; PRIOR APPLICATION NUMBER: 09/416,901  
;; PRIOR FILING DATE: 1999-10-13  
;; PRIOR APPLICATION NUMBER: 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 22  
;; LENGTH: 446  
;; TYPE: PRT  
;; ORGANISM: Homo sapiens  
US-10-476-935-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 41;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPFRSGLGAPLGL 41  
DB 15 TQHGIRLPFRSGLGAPLGL 34

RESULT 60  
US-10-940-867-22  
;; Sequence 22, Application US/10940867  
;; Publication No. US20050026256A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Gurney, Mark E.  
;; APPLICANT: Bienkowski, Michael J.  
;; APPLICANT: Heinrikson, Robert L.  
;; APPLICANT: Parodi, Luis A.  
;; APPLICANT: Yan, Riqiang  
;; APPLICANT: Pharmacia & Upjohn Company  
;; TITLE OF INVENTION: Alzheimer's Disease Secretase  
;; FILE REFERENCE: 6177.PCPA  
;; CURRENT APPLICATION NUMBER: US/10/940,867  
;; CURRENT FILING DATE: 2004-09-14

;; PRIOR APPLICATION NUMBER: US 09/806,194  
;; PRIOR FILING DATE: 2001-03-26  
;; PRIOR APPLICATION NUMBER: US 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 49  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 22  
;; LENGTH: 446  
;; TYPE: PRT  
;; ORGANISM: Homo sapiens  
US-10-940-867-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 41;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPFRSGLGAPLGL 41  
DB 15 TQHGIRLPFRSGLGAPLGL 34

RESULT 61  
US-10-477-076-22  
;; Sequence 22, Application US/10477076  
;; Publication No. US20050080232A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Beinkowski et al.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
;; FILE REFERENCE: 28341/6280M2  
;; CURRENT FILING DATE: 2003-11-06  
;; PRIOR APPLICATION NUMBER: US/10/477,076  
;; PRIOR FILING DATE: 09/416,901  
;; PRIOR APPLICATION NUMBER: 60/155,493  
;; PRIOR FILING DATE: 1999-10-13  
;; PRIOR APPLICATION NUMBER: 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 22  
;; LENGTH: 446  
;; TYPE: PRT  
;; ORGANISM: Homo sapiens  
US-10-477-076-22

Query Match 100.0%; Score 104; DB 1; Length 446;  
Best Local Similarity 100.0%; Pred. No. 41;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPFRSGLGAPLGL 41  
DB 15 TQHGIRLPFRSGLGAPLGL 34

RESULT 62  
US-09-794-927-30  
;; Sequence 30, Application US/09794927  
;; Patent No. US20010016324A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Gurney, Mark E.  
;; APPLICANT: Bienkowski, Michael J.  
;; APPLICANT: Heinrikson, Robert L.  
;; APPLICANT: Parodi, Luis A.  
;; APPLICANT: Yan, Riqiang  
;; APPLICANT: Alzheimer's Disease Secretase, APP SUBSTRATES THEREFOR, AND  
;; TITLE OF INVENTION: USES  
;; FILE REFERENCE: 28341/6280FG

```

; CURRENT APPLICATION NUMBER: US/09/794,927
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-927-30
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```
Query Match          100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      22 TOHGIRLPLRSGLGAPLGL 41
Db      22 TOHGIRLPLRSGLGAPLGL 41
```

```

RESULT 63
US-09-795-847-30
; Sequence 30, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-795-847-30
```

```
Query Match          100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      22 TOHGIRLPLRSGLGAPLGL 41
Db      22 TOHGIRLPLRSGLGAPLGL 41
```

RESULT 64

```

US-09-794-743-30
; Sequence 30, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-743-30
```

```
Query Match          100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      22 TOHGIRLPLRSGLGAPLGL 41
Db      22 TOHGIRLPLRSGLGAPLGL 41
```

```

RESULT 65
US-09-794-748-30
; Sequence 30, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280JL
; CURRENT APPLICATION NUMBER: US/09/794,748
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 30
; LENGTH: 453
; TYPE: PRT
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ORGANISM: Homo sapiens  
US-09-794-748-30

Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 42;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPRLRSGLGAPLGL 41  
DB 22 TONGIRLPRLRSGLGAPLGL 41

RESULT 66  
US-09-794-925-30

Sequence 30, Application US/09794925  
Patent No. US20020064819A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinrichson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

FILE REFERENCE: 28341/6280H1

CURRENT APPLICATION NUMBER: US/09/794,925

CURRENT FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 30

LENGTH: 453

TYPE: PRT

ORGANISM: Homo sapiens

US-09-794-925-30

Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 42;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPRLRSGLGAPLGL 41  
DB 22 TONGIRLPRLRSGLGAPLGL 41

RESULT 67  
US-09-681-442-30

Sequence 30, Application US/09681442  
Patent No. US20020081634A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinrichson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

FILE REFERENCE: 28341/6280FG

CURRENT APPLICATION NUMBER: US/09/681,442

CURRENT FILING DATE: 2001-04-05

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 30

LENGTH: 453

TYPE: PRT

ORGANISM: Homo sapiens

US-09-681-442-30

Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 42;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPRLRSGLGAPLGL 41  
DB 22 TONGIRLPRLRSGLGAPLGL 41

RESULT 68  
US-09-869-414-30

Sequence 30, Application US/09869414  
Publication No. US20030077226A1

GENERAL INFORMATION:

APPLICANT: Bienkowski et al.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

FILE REFERENCE: 28341/6280M

CURRENT APPLICATION NUMBER: US/09/869,414

CURRENT FILING DATE: 2001-06-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 30

LENGTH: 453

TYPE: PRT

ORGANISM: Homo sapiens

US-09-869-414-30

Query Match 100.0%; Score 104; DB 1; Length 453;  
Best Local Similarity 100.0%; Pred. No. 42;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPRLRSGLGAPLGL 41  
DB 22 TONGIRLPRLRSGLGAPLGL 41

RESULT 69  
US-09-548-366-30

Sequence 30, Application US/09548366  
Publication No. US20030104365A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinrichson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND

```
FILE REFERENCE: 28341/6280A
CURRENT APPLICATION NUMBER: US/09/548,366
PRIOR FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 65
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 30
LENGTH: 453
TYPE: PRT
ORGANISM: Homo sapiens
US-09-548-366-30
```

```
Query Match      100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPRLRSGGAPLGL 41
DB      22 TOHGIRLPRLRSGGAPLGL 41
```

```
RESULT 70
US-10-652-927-30
Sequence 30, Application US/10652927
Publication No. US20040043408A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280N3
CURRENT APPLICATION NUMBER: US/10/652,927
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 30
LENGTH: 453
TYPE: PRT
ORGANISM: Homo sapiens
US-10-652-927-30
```

```
Query Match      100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPRLRSGGAPLGL 41
DB      22 TOHGIRLPRLRSGGAPLGL 41
```

```
RESULT 71
US-10-652-830-30
Sequence 30, Application US/10652830
Publication No. US20040048303A1
GENERAL INFORMATION:
```

```
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280N1
CURRENT APPLICATION NUMBER: US/10/652,830
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 30
LENGTH: 453
TYPE: PRT
ORGANISM: Homo sapiens
US-10-652-830-30
```

```
Query Match      100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPRLRSGGAPLGL 41
DB      22 TOHGIRLPRLRSGGAPLGL 41
```

```
RESULT 72
US-10-652-045-30
Sequence 30, Application US/10652045
Publication No. US20040166507A1
GENERAL INFORMATION:
APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
FILE REFERENCE: 29915/6280N2
CURRENT APPLICATION NUMBER: US/10/652,045
CURRENT FILING DATE: 2003-08-29
PRIOR APPLICATION NUMBER: 09/794,925
PRIOR FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 30
LENGTH: 453
TYPE: PRT
ORGANISM: Homo sapiens
US-10-652-045-30
```

```
Query Match      100.0%; Score 104; DB 1; Length 453;
Best Local Similarity 100.0%; Pred. No. 42;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TOHGIRLPRLRSGGAPLGL 41
DB      22 TOHGIRLPRLRSGGAPLGL 41
```

## RESULT 73

US-10-476-935-30  
; Sequence 30, Application US/10476935  
; Publication No. US20040234976A1  
; GENERAL INFORMATION:  
; APPLICANT: Beinowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/6280M1  
; CURRENT FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: US/10/476,935  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 30  
; LENGTH: 453  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-476-935-30

Query Match 100.0%; Score 104; DB 1; Length 453;

Best Local Similarity 100.0%; Pred. No. 42;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGLGAPLGL 41

Db 22 TONGIRLPLRSGLGAPLGL 41

## RESULT 74

US-10-940-867-30  
; Sequence 30, Application US/10940867  
; Publication No. US20050026256A1  
; GENERAL INFORMATION:  
; APPLICANT: Guiney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrikson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; APPLICANT: Pharmacia & Upjohn Company  
; TITLE OF INVENTION: Alzheimer's Disease Secretase  
; FILE REFERENCE: 6177.PCPA  
; CURRENT FILING DATE: 2004-09-14  
; PRIOR APPLICATION NUMBER: US/10/940,867  
; PRIOR FILING DATE: 2001-03-26  
; PRIOR APPLICATION NUMBER: US 09/806,194  
; PRIOR FILING DATE: 2001-03-26  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 49  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 30  
; LENGTH: 453  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-940-867-30

Query Match 100.0%; Score 104; DB 1; Length 453;

Best Local Similarity 100.0%; Pred. No. 42;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGLGAPLGL 41

Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 75  
US-10-477-076-30  
; Sequence 30, Application US/10477076  
; Publication No. US20050080232A1  
; GENERAL INFORMATION:  
; APPLICANT: Beinowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/6280M2  
; CURRENT FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: US/10/477,076  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 30  
; LENGTH: 453  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-477-076-30

Query Match 100.0%; Score 104; DB 1; Length 453;

Best Local Similarity 100.0%; Pred. No. 42;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGLGAPLGL 41

Db 22 TONGIRLPLRSGLGAPLGL 41

## RESULT 76

US-10-627-473-10  
; Sequence 10, Application US/10627473  
; Publication No. US20040096950A1  
; GENERAL INFORMATION:  
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE  
; APPLICANT: PATEL, SAHIL JOB  
; APPLICANT: YON, JEFFREY ROLAND  
; APPLICANT: CLASBY, ANNE  
; APPLICANT: HAMILTON, BRUCE JOHN  
; APPLICANT: SHAH, ALEEM  
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME  
; FILE REFERENCE: 674553-2002.1  
; CURRENT FILING DATE: 2003-07-25  
; PRIOR APPLICATION NUMBER: US/10/627,473  
; PRIOR FILING DATE: 2002-07-26  
; PRIOR APPLICATION NUMBER: 60/398,681  
; NUMBER OF SEQ ID NOS: 46  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 10  
; LENGTH: 454  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-627-473-10

Query Match 100.0%; Score 104; DB 1; Length 454;

Best Local Similarity 100.0%; Pred. No. 43;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPLRSGLGAPLGL 41

Db 24 TOHGIRLPLRSGLGAPLGL 43

## RESULT 77

US-10-372-473-7  
; Sequence 7, Application US/10372473  
; Publication No. US2004005691A1  
; GENERAL INFORMATION:  
; APPLICANT: Chou, Kuo-Chen  
; APPLICANT: Howe, W. Jeffery  
; TITLE OF INVENTION: Modified BACE  
; FILE REFERENCE: MHB 01-1766-A  
; CURRENT APPLICATION NUMBER: US/10/372,473  
; CURRENT FILING DATE: 2003-02-21  
; NUMBER OF SEQ ID NOS: 24  
; SOFTWARE: PatentIn version 3.2  
; SEQ ID NO 7  
; LENGTH: 455  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
; FEATURE:  
; NAME/KEY: MISC FEATURE  
; OTHER INFORMATION: Amino acid sequence of recombinant human BACE with P3K mutation  
US-10-372-473-7

Query Match 100.0%; Score 104; DB 1; Length 455;

Best Local Similarity 100.0%; Pred. No. 43;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPLRSGLGAPLGL 41

Db 24 TOHGIRLPLRSGLGAPLGL 43

## RESULT 78

US-10-627-473-2  
; Sequence 2, Application US/10627473  
; Publication No. US20040096950A1  
; GENERAL INFORMATION:  
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE  
; APPLICANT: PATEL, SAHIL JOE  
; APPLICANT: YON, JEFFREY ROLAND  
; APPLICANT: CLEASBY, ANNE  
; APPLICANT: HAMILTON, BRUCE JOHN  
; APPLICANT: SHAH, ALEEM  
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME  
; FILE REFERENCE: 674553-2002.1  
; CURRENT APPLICATION NUMBER: US/10/627,473  
; CURRENT FILING DATE: 2003-07-25  
; PRIOR APPLICATION NUMBER: 60/398,681  
; PRIOR FILING DATE: 2002-07-26  
; NUMBER OF SEQ ID NOS: 46  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 2  
; LENGTH: 455  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-627-473-2

Query Match 100.0%; Score 104; DB 1; Length 455;

Best Local Similarity 100.0%; Pred. No. 43;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPLRSGLGAPLGL 41

Db 24 TOHGIRLPLRSGLGAPLGL 43

## RESULT 79

US-10-627-473-6  
; Sequence 6, Application US/10627473

; Publication No. US20040096950A1

; GENERAL INFORMATION:  
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE  
; APPLICANT: PATEL, SAHIL JOE  
; APPLICANT: YON, JEFFREY ROLAND  
; APPLICANT: CLEASBY, ANNE  
; APPLICANT: HAMILTON, BRUCE JOHN  
; APPLICANT: SHAH, ALEEM  
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME  
; FILE REFERENCE: 674553-2002.1  
; CURRENT APPLICATION NUMBER: US/10/627,473  
; CURRENT FILING DATE: 2003-07-25  
; PRIOR APPLICATION NUMBER: 60/398,681  
; PRIOR FILING DATE: 2002-07-26  
; NUMBER OF SEQ ID NOS: 46  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 6  
; LENGTH: 455  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-627-473-6

Query Match 100.0%; Score 104; DB 1; Length 455;

Best Local Similarity 100.0%; Pred. No. 43;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPLRSGLGAPLGL 41

Db 24 TOHGIRLPLRSGLGAPLGL 43

## RESULT 80

US-10-627-473-8  
; Sequence 8, Application US/10627473  
; Publication No. US20040096950A1  
; GENERAL INFORMATION:  
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE  
; APPLICANT: PATEL, SAHIL JOE  
; APPLICANT: YON, JEFFREY ROLAND  
; APPLICANT: CLEASBY, ANNE  
; APPLICANT: HAMILTON, BRUCE JOHN  
; APPLICANT: SHAH, ALEEM  
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME  
; FILE REFERENCE: 674553-2002.1  
; CURRENT APPLICATION NUMBER: US/10/627,473  
; CURRENT FILING DATE: 2003-07-25  
; PRIOR APPLICATION NUMBER: 60/398,681  
; PRIOR FILING DATE: 2002-07-26  
; NUMBER OF SEQ ID NOS: 46  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 8  
; LENGTH: 455  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-627-473-8

Query Match 100.0%; Score 104; DB 1; Length 455;

Best Local Similarity 100.0%; Pred. No. 43;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TOHGIRLPLRSGLGAPLGL 41

Db 24 TOHGIRLPLRSGLGAPLGL 43

## RESULT 81

US-10-627-473-14  
; Sequence 14, Application US/10627473  
; Publication No. US20040096950A1  
; GENERAL INFORMATION:  
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE

```

; APPLICANT: PATEL, SAHIL JOB
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 14
; LENGTH: 455
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-10-627-473-14

Query Match      100.0%; Score 104; DB 1; Length 455;
Best Local Similarity 100.0%; Pred. No. 43;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      24 TQHGIRLPRLRSGLGAPLGL 43

RESULT 82
; US-10-281-092-8
; Sequence 8, Application US/10281092
; Publication No. US20040121947A1
; GENERAL INFORMATION:
; APPLICANT: Ghosh, Arun K.
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Bilcer, Geoffrey
; APPLICANT: Chang, Manpin
; APPLICANT: Hong, Lin
; APPLICANT: Koelsch, Gerald E.
; APPLICANT: Loy, Jeffrey A.
; APPLICANT: Turner, Robert T., III
; APPLICANT: Devasumadrum, Thippeswamy
; TITLE OF INVENTION: COMPOUNDS WHICH INHIBIT BETA-SECRETASE
; FILE REFERENCE: 2932.1001-004
; CURRENT APPLICATION NUMBER: US/10/281,092
; CURRENT FILING DATE: 2002-10-23
; PRIOR APPLICATION NUMBER: US 10/032,818
; PRIOR FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: PCT US01/50826
; PRIOR FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: US 60/258,705
; PRIOR FILING DATE: 2000-12-28
; PRIOR APPLICATION NUMBER: US 60/275,756
; PRIOR FILING DATE: 2001-03-14
; PRIOR APPLICATION NUMBER: US 60/335,952
; PRIOR FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: US 60/333,545
; PRIOR FILING DATE: 2001-11-27
; PRIOR APPLICATION NUMBER: US 60/348,464
; PRIOR FILING DATE: 2002-01-14
; PRIOR APPLICATION NUMBER: US 60/348,615
; PRIOR FILING DATE: 2002-01-14
; PRIOR APPLICATION NUMBER: US 60/390,804
; PRIOR FILING DATE: 2002-06-20
; PRIOR APPLICATION NUMBER: US 60/397,557
; PRIOR FILING DATE: 2002-07-19
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 59
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 8
; LENGTH: 456
```

```

; TYPE: PRT
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: deduced amino acid sequence of promapsin 2-T1
; US-10-281-092-8

Query Match      100.0%; Score 104; DB 1; Length 456;
Best Local Similarity 100.0%; Pred. No. 43;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      24 TQHGIRLPRLRSGLGAPLGL 43

RESULT 83
; US-09-794-927-24
; Sequence 24, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20081
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-794-927-24

Query Match      100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      28 TQHGIRLPRLRSGLGAPLGL 47

RESULT 84
; US-09-794-927-32
; Sequence 32, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
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; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-927-32
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Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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QY      22 TQHGIRLPURSGIGCAPLGL 41
Db      22 TQHGIRLPURSGIGCAPLGL 41
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RESULT 85
US-09-795-847-24
; Sequence 24, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-795-847-24
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
QY      22 TQHGIRLPURSGIGCAPLGL 41
Db      22 TQHGIRLPURSGIGCAPLGL 41
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RESULT 86
US-09-795-847-32
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; Sequence 32, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 32
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-795-847-32
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Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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QY      22 TQHGIRLPURSGIGCAPLGL 41
Db      22 TQHGIRLPURSGIGCAPLGL 41
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```

RESULT 87
US-09-794-743-24
; Sequence 24, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 24
; LENGTH: 459
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-743-24
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US-09-794-743-24

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 44;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TONGIRLPRLRSGLGAPLGL 41  
Db 28 TONGIRLPRLRSGLGAPLGL 47

RESULT 88

US-09-794-743-32  
; Sequence 32, Application US/09794743  
; Patent No. US20010021391A1

; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
; TITLE OF INVENTION: USES  
; FILE REFERENCE: 28341/62808C  
; CURRENT APPLICATION NUMBER: US/09/794,743  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO 32  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens

US-09-794-743-32

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 44;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TONGIRLPRLRSGLGAPLGL 41  
Db 22 TONGIRLPRLRSGLGAPLGL 41

RESULT 89

US-09-794-748-24  
; Sequence 24, Application US/09794748  
; Patent No. US20020037315A1

; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
; TITLE OF INVENTION: USES  
; FILE REFERENCE: 28341/62808C  
; CURRENT APPLICATION NUMBER: US/09/794,748  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: Patentin Ver. 2.0

; SEQ ID NO 24

; LENGTH: 459

; TYPE: PRT

; ORGANISM: Homo sapiens

US-09-794-748-24

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 44;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TONGIRLPRLRSGLGAPLGL 41  
Db 28 TONGIRLPRLRSGLGAPLGL 47

RESULT 90

US-09-794-748-32  
; Sequence 32, Application US/09794748  
; Patent No. US20020037315A1

; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
; TITLE OF INVENTION: USES  
; FILE REFERENCE: 28341/62808C  
; CURRENT APPLICATION NUMBER: US/09/794,748  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO 32  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens

US-09-794-748-32

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 44;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 22 TONGIRLPRLRSGLGAPLGL 41  
Db 22 TONGIRLPRLRSGLGAPLGL 41

RESULT 91

US-09-794-925-24  
; Sequence 24, Application US/09794925  
; Patent No. US20020064819A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.

```
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 24
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-794-925-24
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Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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QY 22 TQHGIRLPLRSGLGAPLGL 41
DB 28 TQHGIRLPLRSGLGAPLGL 47
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RESULT 92
US-09-794-925-32
/ Sequence 32, Application US/09794925
/ Patent No. US20020064819A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 32
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-794-925-32
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Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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QY 22 TQHGIRLPLRSGLGAPLGL 41
DB 22 TQHGIRLPLRSGLGAPLGL 41
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RESULT 93
US-09-681-442-24
/ Sequence 24, Application US/09681442
/ Patent No. US20020081634A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280FG
/ CURRENT APPLICATION NUMBER: US/09/681,442
/ PRIOR FILING DATE: 2001-04-05
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 24
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-681-442-24
```

```
Query Match 100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
QY 22 TQHGIRLPLRSGLGAPLGL 41
DB 28 TQHGIRLPLRSGLGAPLGL 47
```

```
RESULT 94
US-09-681-442-32
/ Sequence 32, Application US/09681442
/ Patent No. US20020081634A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280FG
/ CURRENT APPLICATION NUMBER: US/09/681,442
/ PRIOR FILING DATE: 2001-04-05
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ NUMBER OF SEQ ID NOS: 73
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SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 32  
LENGTH: 459  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-681-442-32

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 44;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLRSGLGAPLGL 41  
DB 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 95  
US-09-869-414-24  
Sequence 24, Application US/09869414  
Publication No. US20030077226A1  
GENERAL INFORMATION:  
APPLICANT: Belinkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M  
CURRENT APPLICATION NUMBER: US/09/869,414  
CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 24  
LENGTH: 459  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-869-414-24

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 44;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLRSGLGAPLGL 41  
DB 28 TOHGIRLPRLRSGLGAPLGL 47

RESULT 96  
US-09-869-414-32  
Sequence 32, Application US/09869414  
Publication No. US20030077226A1  
GENERAL INFORMATION:  
APPLICANT: Belinkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M  
CURRENT APPLICATION NUMBER: US/09/869,414  
CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 32  
LENGTH: 459  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-869-414-32

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 44;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLRSGLGAPLGL 41  
DB 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 97  
US-09-548-366-24  
Sequence 24, Application US/09548366  
Publication No. US20030104365A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
FILE REFERENCE: 28341/6280A  
CURRENT APPLICATION NUMBER: US/09/548,366  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 65  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 24  
LENGTH: 459  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-548-366-24

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 44;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPRLRSGLGAPLGL 41  
DB 28 TOHGIRLPRLRSGLGAPLGL 47

RESULT 98  
US-09-548-366-32  
Sequence 32, Application US/09548366  
Publication No. US20030104365A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
FILE REFERENCE: 28341/6280A  
CURRENT APPLICATION NUMBER: US/09/548,366

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/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 65
/ SOFTWARE: Patent In Ver. 2.0
/ SEQ ID NO 32
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-548-366-32
```

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Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 99
US-10-372-473-24
/ Sequence 24, Application US/10372473
/ Publication No. US20040005691A1
/ GENERAL INFORMATION:
/ APPLICANT: Chou, Kuo-Chen
/ APPLICANT: Howe, W. Jeffrey
/ TITLE OF INVENTION: Modified BACE
/ FILE REFERENCE: MBHB 01-1766-A
/ CURRENT APPLICATION NUMBER: US/10/372,473
/ CURRENT FILING DATE: 2003-02-21
/ NUMBER OF SEQ ID NOS: 24
/ SOFTWARE: Patent In version 3.2
/ SEQ ID NO 24
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
/ FEATURE:
/ NAME/KEY: MISC_FEATURE
/ OTHER INFORMATION: Human recombinant BACE with 6-His tags.
US-10-372-473-24
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 100
US-10-652-927-24
/ Sequence 24, Application US/10652927
/ Publication No. US20040043408A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N1
/ CURRENT APPLICATION NUMBER: US/10/652,927
/ CURRENT FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
```

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/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: Patent In Ver. 2.0
/ SEQ ID NO 24
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-652-927-24
```

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Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      28 TQHGIRLPRLRSGLGAPLGL 47
```

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RESULT 101
US-10-652-927-32
/ Sequence 32, Application US/10652927
/ Publication No. US20040043408A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N1
/ CURRENT APPLICATION NUMBER: US/10/652,927
/ CURRENT FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: Patent In Ver. 2.0
/ SEQ ID NO 32
/ LENGTH: 459
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-652-927-32
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      22 TQHGIRLPRLRSGLGAPLGL 41
Db      22 TQHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 102
US-10-652-830-24
/ Sequence 24, Application US/10652830
/ Publication No. US20040048303A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N1
```

```
;; CURRENT APPLICATION NUMBER: US/10/652,830
;; CURRENT FILING DATE: 2003-08-29
;; PRIOR APPLICATION NUMBER: 09/794,925
;; PRIOR FILING DATE: 2001-02-27
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 24
;; LENGTH: 459
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-10-652-830-24
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
OY      22 TOHGIRLPRLRSGLGAPLGL 41
        |||||||
Db       28 TOHGIRLPRLRSGLGAPLGL 47
```

```
RESULT 103
US-10-652-830-32
;; Sequence 32, Application US/10652830
;; Publication No. US20040048303A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney et al.
;; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
;; FILE REFERENCE: 29915/6280N1
;; CURRENT FILING DATE: 2003-08-29
;; PRIOR APPLICATION NUMBER: US/10/652,830
;; PRIOR FILING DATE: 2001-02-27
;; PRIOR APPLICATION NUMBER: 09/794,925
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 32
;; LENGTH: 459
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-10-652-830-32
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
OY      22 TOHGIRLPRLRSGLGAPLGL 41
        |||||||
Db       22 TOHGIRLPRLRSGLGAPLGL 41
```

```
RESULT 104
US-10-652-045-24
```

```
;; Sequence 24, Application US/10652045
;; Publication No. US20040166507A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney et al.
;; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
;; FILE REFERENCE: 29915/6280N2
;; CURRENT APPLICATION NUMBER: US/10/652,045
;; CURRENT FILING DATE: 2003-08-29
;; PRIOR APPLICATION NUMBER: 09/794,925
;; PRIOR FILING DATE: 2001-02-27
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 24
;; LENGTH: 459
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-10-652-045-24
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
OY      22 TOHGIRLPRLRSGLGAPLGL 41
        |||||||
Db       28 TOHGIRLPRLRSGLGAPLGL 47
```

```
RESULT 105
US-10-652-045-32
;; Sequence 32, Application US/10652045
;; Publication No. US20040166507A1
;; GENERAL INFORMATION:
;; APPLICANT: Gurney et al.
;; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
;; FILE REFERENCE: 29915/6280N2
;; CURRENT FILING DATE: 2003-08-29
;; PRIOR APPLICATION NUMBER: US/10/652,045
;; PRIOR FILING DATE: 2001-02-27
;; PRIOR APPLICATION NUMBER: 09/794,925
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: PatentIn Ver. 2.0
;; SEQ ID NO 32
;; LENGTH: 459
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-10-652-045-32
```

```
Query Match          100.0%; Score 104; DB 1; Length 459;
Best Local Similarity 100.0%; Pred. No. 44;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

Qy 22 TQHGIRLPLRSGIGCAPLGL 41  
|||  
Db 22 TQHGIRLPLRSGIGCAPLGL 41

RESULT 106  
US-10-476-935-24  
; Sequence 24, Application US/10476935  
; Publication No. US20040234976A1  
; GENERAL INFORMATION:  
; APPLICANT: Beinowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M1  
; CURRENT APPLICATION NUMBER: US/10/476,935  
; PRIOR FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 24  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-476-935-24

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 44;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPLRSGIGCAPLGL 41  
|||  
Db 28 TQHGIRLPLRSGIGCAPLGL 47

RESULT 107  
US-10-476-935-32  
; Sequence 32, Application US/10476935  
; Publication No. US20040234976A1  
; GENERAL INFORMATION:  
; APPLICANT: Beinowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M1  
; CURRENT APPLICATION NUMBER: US/10/476,935  
; CURRENT FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 32  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-476-935-32

Query Match 100.0%; Score 104; DB 1; Length 459;

Best Local Similarity 100.0%; Pred. No. 44;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 22 TQHGIRLPLRSGIGCAPLGL 41  
|||  
Db 22 TQHGIRLPLRSGIGCAPLGL 41

RESULT 108  
US-10-940-867-24  
; Sequence 24, Application US/10940867  
; Publication No. US20050026256A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: Alzheimer's Disease Secretase  
; FILE REFERENCE: 6177.PCPA  
; CURRENT APPLICATION NUMBER: US/10/940,867  
; CURRENT FILING DATE: 2004-09-14  
; PRIOR APPLICATION NUMBER: US 09/806,194  
; PRIOR FILING DATE: 2001-03-26  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 49  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 24  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-940-867-24

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 44;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPLRSGIGCAPLGL 41  
|||  
Db 28 TQHGIRLPLRSGIGCAPLGL 47

RESULT 109  
US-10-940-867-32  
; Sequence 32, Application US/10940867  
; Publication No. US20050026256A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: Alzheimer's Disease Secretase  
; FILE REFERENCE: 6177.PCPA  
; CURRENT APPLICATION NUMBER: US/10/940,867  
; CURRENT FILING DATE: 2004-09-14  
; PRIOR APPLICATION NUMBER: US 09/806,194  
; PRIOR FILING DATE: 2001-03-26  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 49  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 32  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-940-867-32

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 44;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41  
Db 22 TQHGIRLPLRSGLGAPLGL 41

## RESULT 110

US-10-477-076-24  
; Sequence 24, Application US/10477076  
; Publication No. US20050080232A1  
; GENERAL INFORMATION:  
; APPLICANT: Beikowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/6280M2  
; CURRENT FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 24  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-477-076-24

Query Match 100.0%; Score 104; DB 1; Length 459;  
Best Local Similarity 100.0%; Pred. No. 44;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41  
Db 28 TQHGIRLPLRSGLGAPLGL 47

## RESULT 111

US-10-477-076-32  
; Sequence 32, Application US/10477076  
; Publication No. US20050080232A1  
; GENERAL INFORMATION:  
; APPLICANT: Beikowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M2  
; CURRENT FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: US/10/477,076  
; PRIOR FILING DATE: 09/416,901  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 32  
; LENGTH: 459  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-477-076-32

Query Match 100.0%; Score 104; DB 1; Length 459;

Best Local Similarity 100.0%; Pred. No. 44;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41  
Db 22 TQHGIRLPLRSGLGAPLGL 41

## RESULT 112

US-10-627-473-18  
; Sequence 18, Application US/10627473  
; Publication No. US20040096950A1  
; GENERAL INFORMATION:  
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE  
; APPLICANT: PATEL, SAHIL JOE  
; APPLICANT: YON, JEFFREY ROLAND  
; APPLICANT: CLEASBY, ANNE  
; APPLICANT: HAMILTON, BRUCE JOHN  
; APPLICANT: SHAH, ALBEM  
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME  
; FILE REFERENCE: 674553-2002.1  
; CURRENT FILING DATE: 2003-07-25  
; PRIOR APPLICATION NUMBER: US/10/627,473  
; PRIOR FILING DATE: 2002-07-26  
; NUMBER OF SEQ ID NOS: 46  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 18  
; LENGTH: 460  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-627-473-18

Query Match 100.0%; Score 104; DB 1; Length 460;  
Best Local Similarity 100.0%; Pred. No. 44;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41  
Db 24 TQHGIRLPLRSGLGAPLGL 43

## RESULT 113

US-10-627-473-4  
; Sequence 4, Application US/10627473  
; Publication No. US20040096950A1  
; GENERAL INFORMATION:  
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE  
; APPLICANT: PATEL, SAHIL JOE  
; APPLICANT: YON, JEFFREY ROLAND  
; APPLICANT: CLEASBY, ANNE  
; APPLICANT: HAMILTON, BRUCE JOHN  
; APPLICANT: SHAH, ALBEM  
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME  
; FILE REFERENCE: 674553-2002.1  
; CURRENT FILING DATE: 2003-07-25  
; PRIOR APPLICATION NUMBER: US/10/627,473  
; PRIOR FILING DATE: 2002-07-26  
; NUMBER OF SEQ ID NOS: 46  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 4  
; LENGTH: 461  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-627-473-4

Query Match 100.0%; Score 104; DB 1; Length 461;  
Best Local Similarity 100.0%; Pred. No. 44;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41  
Db 24 TOHGIRLPLRSGLGAPLGL 43

RESULT 114  
US-10-627-473-12  
; Sequence 12, Application US/10627473  
; Publication No. US20040096950A1  
; GENERAL INFORMATION:  
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE  
; APPLICANT: PATEL, SAHIL JOE  
; APPLICANT: YON, JEFFREY ROLAND  
; APPLICANT: CLEASBY, ANNE  
; APPLICANT: HAMILTON, BRUCE JOHN  
; APPLICANT: SHAH, ALEEM  
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME  
; FILE REFERENCE: 674553-2002.1  
; CURRENT FILING DATE: 2003-07-25  
; PRIOR APPLICATION NUMBER: 60/398,681  
; PRIOR FILING DATE: 2002-07-26  
; NUMBER OF SEQ ID NOS: 46  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 12  
; LENGTH: 461  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-627-473-12

Query Match 100.0%; Score 104; DB 1; Length 461;  
Best Local Similarity 100.0%; Pred. No. 44;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41  
Db 24 TOHGIRLPLRSGLGAPLGL 43

RESULT 115  
US-10-627-473-16  
; Sequence 16, Application US/10627473  
; Publication No. US20040096950A1  
; GENERAL INFORMATION:  
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE  
; APPLICANT: PATEL, SAHIL JOE  
; APPLICANT: YON, JEFFREY ROLAND  
; APPLICANT: CLEASBY, ANNE  
; APPLICANT: HAMILTON, BRUCE JOHN  
; APPLICANT: SHAH, ALEEM  
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME  
; FILE REFERENCE: 674553-2002.1  
; CURRENT FILING DATE: 2003-07-25  
; PRIOR APPLICATION NUMBER: 60/398,681  
; PRIOR FILING DATE: 2002-07-26  
; NUMBER OF SEQ ID NOS: 46  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 16  
; LENGTH: 461  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-627-473-16

Query Match 100.0%; Score 104; DB 1; Length 461;  
Best Local Similarity 100.0%; Pred. No. 44;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41

Db 24 TOHGIRLPLRSGLGAPLGL 43

RESULT 116  
US-09-794-927-6  
; Sequence 6, Application US/09794927  
; Patent No. US20010016324A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Blenkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
; TITLE OF INVENTION: US85  
; FILE REFERENCE: 28341/6280FG  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 6  
; LENGTH: 476  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-794-927-6

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 47;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41  
Db 22 TOHGIRLPLRSGLGAPLGL 41

RESULT 117  
US-09-795-847-6  
; Sequence 6, Application US/09795847  
; Patent No. US20010018208A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Blenkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
; TITLE OF INVENTION: US85  
; FILE REFERENCE: 28341/6280FG  
; CURRENT FILING DATE: 2001-02-28  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24



NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO: 6  
LENGTH: 476  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-795-847-6

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 47;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41  
DB 22 TOHGIRLPLRSGLGAPLGL 41

RESULT 118  
US-09-794-743-6  
Sequence 6, Application US/09794743  
Patent No. US20010021391A1

GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280BC  
CURRENT APPLICATION NUMBER: US/09/794,743  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO: 6  
LENGTH: 476  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-794-743-6

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 47;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41  
DB 22 TOHGIRLPLRSGLGAPLGL 41

RESULT 119  
US-09-794-748-6  
Sequence 6, Application US/09794748  
Patent No. US20020037315A1

GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
TITLE OF INVENTION: THEREFOR

FILE REFERENCE: 28341/6280JL  
CURRENT APPLICATION NUMBER: US/09/794,748  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO: 6  
LENGTH: 476  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-794-748-6

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 47;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41  
DB 22 TOHGIRLPLRSGLGAPLGL 41

RESULT 120  
US-09-794-925-6  
Sequence 6, Application US/09794925  
Patent No. US20020064819A1

GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/6280HI  
CURRENT APPLICATION NUMBER: US/09/794,925  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO: 6  
LENGTH: 476  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-794-925-6

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 47;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPLRSGLGAPLGL 41  
DB 22 TOHGIRLPLRSGLGAPLGL 41

RESULT 121

```
US-09-681-442-6
; Sequence 6, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/681,442
; PRIOR FILING DATE: 2001-06-05
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-681-442-6
```

```
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPRLRSGLGAPLGL 41
      |||||||
Db      22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 122
US-09-908-943A-4
; Sequence 4, Application US/09908943A
; Publication No. US20030017991A1
; GENERAL INFORMATION:
; APPLICANT: Yan, Riqiang
; APPLICANT: Tomasselli, Alfredo G.
; APPLICANT: Gurney, Mark E.
; APPLICANT: Emmons, Thomas L.
; APPLICANT: Bienkowski, Mike J.
; APPLICANT: Heinrichson, Robert L.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281A.US1
; CURRENT APPLICATION NUMBER: US/09/908,943A
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-908-943A-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
RESULT 123
US-09-869-414-6
; Sequence 6, Application US/09869414
; Publication No. US20030077226A1
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280W
; CURRENT APPLICATION NUMBER: US/09/869,414
; PRIOR FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-869-414-6
```

```
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
QY      22 TQHGIRLPRLRSGLGAPLGL 41
      |||||||
Db      22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 124
US-09-548-366-6
; Sequence 6, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES THEREFOR
; FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 6
; LENGTH: 476
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-548-366-6
```

```
Query Match          100.0%; Score 104; DB 1; Length 476;
Best Local Similarity 100.0%; Pred. No. 47;
```

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPRLRSGLGAPLGL 41  
Db 22 TQHGIRLPRLRSGLGAPLGL 41

## RESULT 125

US-10-652-927-6  
; Sequence 6, Application US/10652927  
; Publication No. US20040043408A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280N3  
; CURRENT FILING DATE: 2003-08-29  
; PRIOR APPLICATION NUMBER: 09/794,925  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 6  
; LENGTH: 476  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-652-927-6

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 47;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPRLRSGLGAPLGL 41  
Db 22 TQHGIRLPRLRSGLGAPLGL 41

## RESULT 126

US-10-652-830-6  
; Sequence 6, Application US/10652830  
; Publication No. US20040048303A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280N1  
; CURRENT FILING DATE: 2003-08-29  
; PRIOR APPLICATION NUMBER: US/10/652,830  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/794,925  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 6

; LENGTH: 476  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-652-830-6

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 47;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPRLRSGLGAPLGL 41  
Db 22 TQHGIRLPRLRSGLGAPLGL 41

## RESULT 127

US-10-652-045-6  
; Sequence 6, Application US/10652045  
; Publication No. US20040166507A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280N2  
; CURRENT FILING DATE: 2003-08-29  
; PRIOR APPLICATION NUMBER: US/10/652,045  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 6  
; LENGTH: 476  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-652-045-6

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 47;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TQHGIRLPRLRSGLGAPLGL 41  
Db 22 TQHGIRLPRLRSGLGAPLGL 41

## RESULT 128

US-10-476-935-6  
; Sequence 6, Application US/10476935  
; Publication No. US20040234976A1  
; GENERAL INFORMATION:  
; APPLICANT: Beinowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M1  
; CURRENT FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 6  
LENGTH: 476  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-476-935-6

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 47;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPURSGLGAPLGL 41  
Db 22 TOHGIRLPURSGLGAPLGL 41

RESULT 129  
US-10-801-487-4  
Sequence 4, Application US/10801487  
Publication No. US20040241792A1  
GENERAL INFORMATION:  
APPLICANT: Yan et al.  
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
FILE REFERENCE: 29915/00281F  
CURRENT APPLICATION NUMBER: US/10/801,487  
CURRENT FILING DATE: 2004-03-16  
PRIOR APPLICATION NUMBER: 09/908,943  
PRIOR FILING DATE: 2001-07-19  
PRIOR APPLICATION NUMBER: 60/219,795  
PRIOR FILING DATE: 2000-07-19  
NUMBER OF SEQ ID NOS: 197  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 4  
LENGTH: 476  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-801-487-4

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 47;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPURSGLGAPLGL 41  
Db 22 TOHGIRLPURSGLGAPLGL 41

RESULT 130  
US-10-801-938-4  
Sequence 4, Application US/10801938  
Publication No. US20040253706A1  
GENERAL INFORMATION:  
APPLICANT: Yan et al.  
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
FILE REFERENCE: 29915/00281D  
CURRENT APPLICATION NUMBER: US/10/801,938  
CURRENT FILING DATE: 2004-03-16  
PRIOR APPLICATION NUMBER: 09/908,943  
PRIOR FILING DATE: 2001-07-19  
PRIOR APPLICATION NUMBER: 60/219,795  
PRIOR FILING DATE: 2000-07-19  
NUMBER OF SEQ ID NOS: 197  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 4  
LENGTH: 476  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-801-938-4

Query Match 100.0%; Score 104; DB 1; Length 476;

Best Local Similarity 100.0%; Pred. No. 47;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPURSGLGAPLGL 41  
Db 22 TOHGIRLPURSGLGAPLGL 41

RESULT 131  
US-10-801-509-4  
Sequence 4, Application US/10801509  
Publication No. US20040254341A1  
GENERAL INFORMATION:  
APPLICANT: Yan et al.  
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
FILE REFERENCE: 29915/00281C  
CURRENT APPLICATION NUMBER: US/10/801,509  
CURRENT FILING DATE: 2004-03-16  
PRIOR APPLICATION NUMBER: 09/908,943  
PRIOR FILING DATE: 2001-07-19  
PRIOR APPLICATION NUMBER: 60/219,795  
PRIOR FILING DATE: 2000-07-19  
NUMBER OF SEQ ID NOS: 197  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 4  
LENGTH: 476  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-801-509-4

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 47;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPURSGLGAPLGL 41  
Db 22 TOHGIRLPURSGLGAPLGL 41

RESULT 132  
US-10-801-486-4  
Sequence 4, Application US/10801486  
Publication No. US20040254342A1  
GENERAL INFORMATION:  
APPLICANT: Yan et al.  
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
FILE REFERENCE: 29915/00281B  
CURRENT APPLICATION NUMBER: US/10/801,486  
CURRENT FILING DATE: 2004-03-16  
PRIOR APPLICATION NUMBER: 09/908,943  
PRIOR FILING DATE: 2001-07-19  
PRIOR APPLICATION NUMBER: 60/219,795  
PRIOR FILING DATE: 2000-07-19  
NUMBER OF SEQ ID NOS: 197  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 4  
LENGTH: 476  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-801-486-4

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 47;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TOHGIRLPURSGLGAPLGL 41  
Db 22 TOHGIRLPURSGLGAPLGL 41

RESULT 133  
US-10-940-867-6  
Sequence 6, Application US/10940867

Publication No. US20050026256A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
APPLICANT: Pharmacia & Upjohn Company  
TITLE OF INVENTION: Alzheimer's Disease Secretase  
FILE REFERENCE: 6177.PCPA  
CURRENT APPLICATION NUMBER: US/10/940,867  
CURRENT FILING DATE: 2004-09-14  
PRIOR APPLICATION NUMBER: US 09/806,194  
PRIOR FILING DATE: 2001-03-26  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 49  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 6  
LENGTH: 476  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-940-867-6

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 47;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41  
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 134  
US-10-477-076-6  
Sequence 6, Application US/10477076  
Publication No. US20050080232A1  
GENERAL INFORMATION:  
APPLICANT: Beinowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M2  
CURRENT APPLICATION NUMBER: US/10/477,076  
CURRENT FILING DATE: 2003-11-06  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 6  
LENGTH: 476  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-477-076-6

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 47;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41  
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 135  
US-10-801-493-4

Sequence 4, Application US/10801493  
Publication No. US20050096457A1  
GENERAL INFORMATION:  
APPLICANT: Yan et al.  
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
FILE REFERENCE: 29915/00281E  
CURRENT APPLICATION NUMBER: US/10/801,493  
CURRENT FILING DATE: 2004-03-16  
PRIOR APPLICATION NUMBER: 09/808,943  
PRIOR FILING DATE: 2001-07-19  
PRIOR APPLICATION NUMBER: 60/219,795  
PRIOR FILING DATE: 2000-07-19  
NUMBER OF SEQ ID NOS: 197  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 4  
LENGTH: 476  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-801-493-4

Query Match 100.0%; Score 104; DB 1; Length 476;  
Best Local Similarity 100.0%; Pred. No. 47;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TONGIRLPLRSGLGAPLGL 41  
Db 22 TONGIRLPLRSGLGAPLGL 41

RESULT 136  
US-09-796-264-2  
Sequence 2, Application US/09796264  
Patent No. US20020049303A1  
GENERAL INFORMATION:  
APPLICANT: Tang, Jordan J.N.  
APPLICANT: Lin, Xini  
APPLICANT: Koelsch, Gerald  
TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods  
FILE REFERENCE: OMRF 179  
CURRENT APPLICATION NUMBER: US/09/796,264  
CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: 09/604,608  
PRIOR FILING DATE: 2000-06-27  
PRIOR APPLICATION NUMBER: 60/168,060  
PRIOR FILING DATE: 1999-11-30  
PRIOR APPLICATION NUMBER: 60/177,836  
PRIOR FILING DATE: 2000-01-25  
PRIOR APPLICATION NUMBER: 60/178,368  
PRIOR FILING DATE: 2000-01-27  
PRIOR APPLICATION NUMBER: 60/210,292  
PRIOR FILING DATE: 2000-06-08  
NUMBER OF SEQ ID NOS: 31  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 2  
LENGTH: 488  
TYPE: PRT  
ORGANISM: Homo sapiens

FEATURE:  
OTHER INFORMATION: Purified Memapsin 2  
OTHER INFORMATION: Amino Acids 28-48 are remnant putative propeptide  
OTHER INFORMATION: residues  
OTHER INFORMATION: Amino Acids 58-61, 78, 80, 82-83, 116, 118-121,  
OTHER INFORMATION: 156, 166, 174, 246, 274, 276, 278-281, 283, and  
OTHER INFORMATION: 376-377 are residues in contact with the OM99-2  
OTHER INFORMATION: Inhibitor  
OTHER INFORMATION: Amino acids 54-57, 61-68, 73-80, 86-89, 109-111,  
OTHER INFORMATION: 113-118, 123-134, 143-154, 165-168, 198-202, and  
OTHER INFORMATION: 220-224 are N-lobe Beta Strands  
OTHER INFORMATION: Amino Acids 184-191 and 210-217 are N-lobe Helices  
OTHER INFORMATION: Amino acids 237-240, 247-249, 251-256, 259-260,  
OTHER INFORMATION: 273-275, 282-285, 316-318, 331-336, 342-348,  
OTHER INFORMATION: 354-357, 366-370, 372-375, 380-383, 390-395,

OTHER INFORMATION: 400-405, and 418-420 are C-lobe Beta Strands  
OTHER INFORMATION: Amino Acids 286-299, 307-310, 350-353, 384-387,  
OTHER INFORMATION: and 427-431 are C-lobe Helices  
US-09-796-264-2

Query Match 100.0%; Score 104; DB 1; Length 488;  
Best Local Similarity 100.0%; Pred. No. 49;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLSGAGAPLGL 41  
Db 9 TQHGIRLPRLSGAGAPLGL 28

RESULT 137  
US-09-845-226-2  
Sequence 2, Application US/09845226  
Patent No. US20020115600A1  
GENERAL INFORMATION:  
APPLICANT: Tang, Jordan J.N.  
APPLICANT: Hong, Lin  
APPLICANT: Ghosh, Arun K.  
TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof  
FILE REFERENCE: OMRF 182  
CURRENT APPLICATION NUMBER: US/09/845,226  
CURRENT FILING DATE: 2001-04-30  
PRIOR APPLICATION NUMBER: 09/603,713  
PRIOR FILING DATE: 2000-06-27  
PRIOR APPLICATION NUMBER: 60/168,060  
PRIOR FILING DATE: 1999-11-30  
PRIOR APPLICATION NUMBER: 60/177,836  
PRIOR FILING DATE: 2000-01-25  
PRIOR APPLICATION NUMBER: 60/178,368  
PRIOR FILING DATE: 2000-01-27  
PRIOR APPLICATION NUMBER: 60/210,292  
PRIOR FILING DATE: 2000-06-08  
NUMBER OF SEQ ID NOS: 31  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 2  
LENGTH: 488  
TYPE: PRT  
ORGANISM: Homo sapiens  
FEATURE:  
OTHER INFORMATION: Purified Memapsin 2  
OTHER INFORMATION: Amino Acids 28-48 are remnant putative propeptide  
OTHER INFORMATION: residues  
OTHER INFORMATION: Amino Acids 58-61, 78, 80, 82-83, 116, 118-121,  
OTHER INFORMATION: 156, 166, 174, 246, 274, 276, 278-281, 283, and  
OTHER INFORMATION: 376-377 are residues in contact with the OM99-2  
OTHER INFORMATION: Inhibitor  
OTHER INFORMATION: Amino acids 54-57, 61-68, 73-80, 86-89, 109-111,  
OTHER INFORMATION: 113-118, 123-134, 143-154, 165-168, 198-202, and  
OTHER INFORMATION: 220-224 are N-lobe Beta Strands  
OTHER INFORMATION: Amino Acids 184-191 and 210-217 are N-lobe Helices  
OTHER INFORMATION: Amino acids 237-240, 247-249, 251-256, 259-260,  
OTHER INFORMATION: 273-275, 282-285, 316-318, 331-336, 342-348,  
OTHER INFORMATION: 354-357, 366-370, 372-375, 380-383, 390-395,  
OTHER INFORMATION: 400-405, and 418-420 are C-lobe Beta Strands  
OTHER INFORMATION: Amino Acids 286-299, 307-310, 350-353, 384-387,  
OTHER INFORMATION: and 427-431 are C-lobe Helices  
US-09-845-226-2

Query Match 100.0%; Score 104; DB 1; Length 488;  
Best Local Similarity 100.0%; Pred. No. 49;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLSGAGAPLGL 41  
Db 9 TQHGIRLPRLSGAGAPLGL 28

RESULT 138  
US-09-795-903A-2

Sequence 2, Application US/09795903A  
Patent No. US20020164760A1  
GENERAL INFORMATION:  
APPLICANT: Tang, Jordan J.N.  
APPLICANT: Lin, Xini  
APPLICANT: Koelsch, Gerald  
TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods  
FILE REFERENCE: OMRF 179  
CURRENT APPLICATION NUMBER: US/09/795,903A  
CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: 09/604,608  
PRIOR FILING DATE: 2000-06-27  
PRIOR APPLICATION NUMBER: 60/168,060  
PRIOR FILING DATE: 1999-11-30  
PRIOR APPLICATION NUMBER: 60/177,836  
PRIOR FILING DATE: 2000-01-25  
PRIOR APPLICATION NUMBER: 60/178,368  
PRIOR FILING DATE: 2000-01-27  
PRIOR APPLICATION NUMBER: 60/210,292  
PRIOR FILING DATE: 2000-06-08  
NUMBER OF SEQ ID NOS: 31  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 2  
LENGTH: 488  
TYPE: PRT  
ORGANISM: Homo sapiens  
FEATURE:  
OTHER INFORMATION: Purified Memapsin 2  
OTHER INFORMATION: Amino Acids 28-48 are remnant putative propeptide  
OTHER INFORMATION: residues  
OTHER INFORMATION: Amino Acids 58-61, 78, 80, 82-83, 116, 118-121,  
OTHER INFORMATION: 156, 166, 174, 246, 274, 276, 278-281, 283, and  
OTHER INFORMATION: 376-377 are residues in contact with the OM99-2  
OTHER INFORMATION: Inhibitor  
OTHER INFORMATION: Amino acids 54-57, 61-68, 73-80, 86-89, 109-111,  
OTHER INFORMATION: 113-118, 123-134, 143-154, 165-168, 198-202, and  
OTHER INFORMATION: 220-224 are N-lobe Beta Strands  
OTHER INFORMATION: Amino Acids 184-191 and 210-217 are N-lobe Helices  
OTHER INFORMATION: Amino acids 237-240, 247-249, 251-256, 259-260,  
OTHER INFORMATION: 273-275, 282-285, 316-318, 331-336, 342-348,  
OTHER INFORMATION: 354-357, 366-370, 372-375, 380-383, 390-395,  
OTHER INFORMATION: 400-405, and 418-420 are C-lobe Beta Strands  
OTHER INFORMATION: Amino Acids 286-299, 307-310, 350-353, 384-387,  
OTHER INFORMATION: and 427-431 are C-lobe Helices  
US-09-795-903A-2

Query Match 100.0%; Score 104; DB 1; Length 488;  
Best Local Similarity 100.0%; Pred. No. 49;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLSGAGAPLGL 41  
Db 9 TQHGIRLPRLSGAGAPLGL 28

RESULT 139  
US-10-032-818-2  
Sequence 2, Application US/10032818  
Publication No. US20030092629A1  
GENERAL INFORMATION:  
APPLICANT: Tang, Jordan J.N.  
APPLICANT: Koelsch, Gerald  
APPLICANT: Ghosh, Arun K.  
TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof  
FILE REFERENCE: 2932.1006-007  
CURRENT APPLICATION NUMBER: US/10/032,818  
CURRENT FILING DATE: 2001-12-28  
PRIOR APPLICATION NUMBER: US 60/275,756  
PRIOR FILING DATE: 2001-03-14  
PRIOR APPLICATION NUMBER: US 60/258,705  
PRIOR FILING DATE: 2000-12-28  
NUMBER OF SEQ ID NOS: 83

SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 2  
LENGTH: 488  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-032-818-2

Query Match 100.0%; Score 104; DB 1; Length 488;  
Best Local Similarity 100.0%; Pred. No. 49;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPRLRSGLGAPLGL 41  
Db 9 TONGIRLPRLRSGLGAPLGL 28

RESULT 140

US-10-820-953-2  
Sequence 2, Application US/10820953  
Publication No. US20040167075A1

GENERAL INFORMATION:  
APPLICANT: Tang, Jordan J.N.  
APPLICANT: Hong, Lin

TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof  
FILE REFERENCE: OMRF 182

CURRENT FILING DATE: 2004-04-08  
PRIOR FILING DATE: 2000-06-27  
PRIOR FILING DATE: 2000-06-27

PRIOR APPLICATION NUMBER: 60/141,363  
PRIOR FILING DATE: 1999-06-28

PRIOR APPLICATION NUMBER: 60/168,060  
PRIOR FILING DATE: 1999-11-30

PRIOR APPLICATION NUMBER: 60/177,836  
PRIOR FILING DATE: 2000-01-25

PRIOR APPLICATION NUMBER: 60/178,368  
PRIOR FILING DATE: 2000-01-27

PRIOR APPLICATION NUMBER: 60/210,292  
PRIOR FILING DATE: 2000-06-08

NUMBER OF SEQ ID NOS: 31  
SOFTWARE: PatentIn Ver. 2.1

SEQ ID NO 2  
LENGTH: 488  
TYPE: PRT

ORGANISM: Homo sapiens  
FEATURE:

OTHER INFORMATION: Purified Memapsin 2  
OTHER INFORMATION: Amino Acids 28-48 are remnant putative propeptide

OTHER INFORMATION: residues  
OTHER INFORMATION: Amino Acids 58-61, 78, 80, 82-83, 116, 118-121,

OTHER INFORMATION: 156, 166, 174, 246, 274, 276, 278-281, 283, and  
OTHER INFORMATION: 376-377 are residues in contact with the OM99-2

OTHER INFORMATION: Inhibitor  
OTHER INFORMATION: Amino acids 54-57, 61-68, 73-80, 86-89, 109-111,

OTHER INFORMATION: 113-118, 123-134, 143-154, 165-168, 198-202, and  
OTHER INFORMATION: 220-224 are N-lobe Beta Strands

OTHER INFORMATION: Amino Acids 184-191 and 210-217 are N-lobe Helices  
OTHER INFORMATION: Amino acids 237-240, 247-249, 251-256, 259-260,

OTHER INFORMATION: 273-275, 282-285, 316-318, 331-336, 342-348,  
OTHER INFORMATION: 354-357, 366-370, 372-375, 380-383, 390-395,

OTHER INFORMATION: 400-405, and 418-420 are C-lobe Beta Strands  
OTHER INFORMATION: Amino Acids 286-299, 307-310, 350-353, 384-387,

OTHER INFORMATION: and 427-431 are C-lobe Helices  
US-10-820-953-2

Query Match 100.0%; Score 104; DB 1; Length 488;  
Best Local Similarity 100.0%; Pred. No. 49;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPRLRSGLGAPLGL 41  
Db 9 TONGIRLPRLRSGLGAPLGL 28

RESULT 141

US-10-773-754-2  
Sequence 2, Application US/10773754  
Publication No. US20040220079A1

GENERAL INFORMATION:  
APPLICANT: Koelsch, Gerald  
APPLICANT: Tang, Jordan J. N.

APPLICANT: Hong, Lin  
APPLICANT: Ghosh, Arun K.

TITLE OF INVENTION: The Board of Trustees of the University of Illinois  
TITLE OF INVENTION: Oklahoma Medical Research Foundation  
TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof

FILE REFERENCE: 022266-000930US  
CURRENT FILING DATE: US/10/773,754

CURRENT FILING DATE: 2004-02-06  
PRIOR APPLICATION NUMBER: US 60/141,363

PRIOR FILING DATE: 1999-06-28  
PRIOR APPLICATION NUMBER: 60/168,060

PRIOR FILING DATE: 1999-11-30  
PRIOR APPLICATION NUMBER: US 60/177,836

PRIOR FILING DATE: 2000-01-25  
PRIOR APPLICATION NUMBER: US 60/178,368

PRIOR FILING DATE: 2000-01-27  
PRIOR APPLICATION NUMBER: US 60/210,292

PRIOR FILING DATE: 2000-06-08  
PRIOR APPLICATION NUMBER: US 09/603,713

PRIOR FILING DATE: 2000-06-27  
PRIOR APPLICATION NUMBER: US 09/845,226

PRIOR FILING DATE: 2001-04-30  
NUMBER OF SEQ ID NOS: 39

SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 2

LENGTH: 488  
TYPE: PRT

ORGANISM: Homo sapiens  
FEATURE:

OTHER INFORMATION: purified memapsin 2, aspartic proteinase 2 (ASP2)  
OTHER INFORMATION: amino acids 28-48 are remnant putative propeptide

OTHER INFORMATION: residues  
OTHER INFORMATION: Amino acids 54-57, 61-68, 73-80, 86-89, 109-111,

OTHER INFORMATION: 113-118, 123-134, 143-154, 165-168, 198-202, and  
OTHER INFORMATION: 220-224 are N-lobe beta strands

FEATURE:

OTHER INFORMATION: Amino acids 58-61, 78, 80, 82-83, 116, 118-121,  
OTHER INFORMATION: 156, 166, 174, 246, 274, 276, 278-281, 283, and

OTHER INFORMATION: 376-377 are residues in contact with the OM99-2  
OTHER INFORMATION: Inhibitor

FEATURE:  
OTHER INFORMATION: Amino acids 184-191 and 210-217 are N-lobe helices  
FEATURE:

OTHER INFORMATION: Amino acids 237-240, 247-249, 251-256, 259-260,  
OTHER INFORMATION: 273-275, 282-285, 316-318, 331-336, 342-348,

OTHER INFORMATION: 354-357, 366-370, 372-375, 380-383, 390-395,  
OTHER INFORMATION: 400-405, and 418-420 are C-lobe beta strands

OTHER INFORMATION: Amino acids 286-299, 307-310, 350-353, 384-387,  
OTHER INFORMATION: and 427-431 are C-lobe helices

US-10-773-754-2

Query Match 100.0%; Score 104; DB 1; Length 488;  
Best Local Similarity 100.0%; Pred. No. 49;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 22 TONGIRLPRLRSGLGAPLGL 41  
Db 9 TONGIRLPRLRSGLGAPLGL 28

RESULT 142

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US-09-794-927-4
; Sequence 4, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-927-4

Query Match      100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 143
US-09-795-847-4
; Sequence 4, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-795-847-4
```

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; ORGANISM: Homo sapiens
US-09-795-847-4

Query Match      100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 144
US-09-794-743-4
; Sequence 4, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-743-4

Query Match      100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 TOHGIRLPRLRSGLGAPLGL 41
Db      22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 145
US-09-794-748-4
; Sequence 4, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280UL
; CURRENT APPLICATION NUMBER: US/09/794,748
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
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; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 4  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-794-748-4

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 52;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
|||||  
Db 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 146  
US-09-794-925-4  
; Sequence 4, Application US/09794925  
; Patent No. US20020064819A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/6280H1  
; CURRENT APPLICATION NUMBER: US/09/794,925  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 4  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-794-925-4

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 52;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
|||||  
Db 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 147  
US-09-681-442-4  
; Sequence 4, Application US/09681442  
; Patent No. US20020081634A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.

; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/6280FG  
; CURRENT APPLICATION NUMBER: US/09/681,442  
; CURRENT FILING DATE: 2001-04-05  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 4  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-681-442-4

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 52;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
|||||  
Db 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 148  
US-09-908-943A-2  
; Sequence 2, Application US/09908943A  
; Publication No. US20030017991A1  
; GENERAL INFORMATION:  
; APPLICANT: Yan, Riqiang  
; APPLICANT: Tomasselli, Alfredo G.  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Emmons, Thomas L.  
; APPLICANT: Bienkowski, Mike J.  
; APPLICANT: Heinrichson, Robert L.  
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
; FILE REFERENCE: 29915/00281A, US1  
; CURRENT APPLICATION NUMBER: US/09/908,943A  
; CURRENT FILING DATE: 2001-07-19  
; PRIOR APPLICATION NUMBER: 60/219,795  
; PRIOR FILING DATE: 2000-07-19  
; NUMBER OF SEQ ID NOS: 197  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 2  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-908-943A-2

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 52;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPRLRSGLGAPLGL 41  
|||||  
Db 22 TQHGIRLPRLRSGLGAPLGL 41

RESULT 149  
US-09-969-671A-2  
; Sequence 2, Application US/09969671A

```
; Publication No. US20030036112A1
; GENERAL INFORMATION:
; APPLICANT: CHAPMAN, CONRAD G.
; APPLICANT: MURPHY, KAY
; APPLICANT: POWELL, DAVID J.
; APPLICANT: SMITH, TRUDI S.
; TITLE OF INVENTION: ASP2
; FILE REFERENCE: GH-70368-D1
; CURRENT APPLICATION NUMBER: US/09/969,671A
; CURRENT FILING DATE: 2001-10-03
; PRIOR APPLICATION NUMBER: UK 9701684.4
; PRIOR FILING DATE: 1997-01-28
; PRIOR APPLICATION NUMBER: 09/009,191
; PRIOR FILING DATE: 1998-01-20
; PRIOR APPLICATION NUMBER: 09/694,200
; PRIOR FILING DATE: 2000-10-23
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-969-671A-2
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
OY      22 TGGGIRLPLRSGLGAPLGL 41
Db      22 TGGGIRLPLRSGLGAPLGL 41
```

```
RESULT 150
US-09-869-414-4
; Sequence 4, Application US/09869414
; Publication No. US20030077226A1
; GENERAL INFORMATION:
; APPLICANT: Belkowsky et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: US/09/869,414
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-869-414-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
OY      22 TGGGIRLPLRSGLGAPLGL 41
Db      22 TGGGIRLPLRSGLGAPLGL 41
```

```
RESULT 151
US-09-548-366-4
```

```
; Sequence 4, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-548-366-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
OY      22 TGGGIRLPLRSGLGAPLGL 41
Db      22 TGGGIRLPLRSGLGAPLGL 41
```

```
RESULT 152
US-10-032-818-4
; Sequence 4, Application US/10032818
; Publication No. US20030092629A1
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Koelsch, Gerald
; TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
; FILE REFERENCE: 2932.1006-007
; CURRENT APPLICATION NUMBER: US/10/032,818
; CURRENT FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: US 60/275,756
; PRIOR FILING DATE: 2001-03-14
; PRIOR APPLICATION NUMBER: US 60/258,705
; PRIOR FILING DATE: 2000-12-28
; NUMBER OF SEQ ID NOS: 83
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapien
; US-10-032-818-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
OY      22 TGGGIRLPLRSGLGAPLGL 41
Db      22 TGGGIRLPLRSGLGAPLGL 41
```

```
RESULT 153
US-10-214-932-104
```

```
; Sequence 104, Application US/10214932
; Publication No. US20030100707A1
; GENERAL INFORMATION:
; APPLICANT: KWANG, Inhwan
; APPLICANT: KIM, Dae Heon
; APPLICANT: LEE, Yong Jik
; TITLE OF INVENTION: SYSTEM FOR DETECTING PROTEASE
; FILE REFERENCE: APB02/US
; CURRENT APPLICATION NUMBER: US/10/214,932
; CURRENT FILING DATE: 2002-08-08
; NUMBER OF SEQ ID NOS: 133
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 104
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-214-932-104

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 T0HGIRLPLRSGLGAPLGL 41
Db      22 T0HGIRLPLRSGLGAPLGL 41

RESULT 154
US-10-308-365-2
; Sequence 2, Application US/10308365
; Publication No. US20030109022A1
; GENERAL INFORMATION:
; APPLICANT: CHAPMAN, CONRAD G.
; APPLICANT: MORPHY, KAT
; APPLICANT: POWELL, DAVID J.
; APPLICANT: SMITH, TRUDI S.
; TITLE OF INVENTION: ASP 2
; FILE REFERENCE: GH-70368-2
; CURRENT APPLICATION NUMBER: US/10/308,365
; CURRENT FILING DATE: 2002-12-03
; PRIOR APPLICATION NUMBER: US/09/694,200
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: UK 9701684.4
; PRIOR FILING DATE: 1997-01-28
; PRIOR APPLICATION NUMBER: 09/009,191
; PRIOR FILING DATE: 1998-01-20
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: HOMO SAPIENS
US-10-308-365-2

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 T0HGIRLPLRSGLGAPLGL 41
Db      22 T0HGIRLPLRSGLGAPLGL 41

RESULT 155
US-10-372-730-9
; Sequence 9, Application US/10372730
; Publication No. US20030167486A1
; GENERAL INFORMATION:
; APPLICANT: Jacobsen, Helmut
; APPLICANT: Mosbach-Ozmen, Laurence
; APPLICANT: Neillboeck-Hochstetter, Peter
; TITLE OF INVENTION: Double transgenic animal model for Alzheimer's Disease
; FILE REFERENCE: Case 21132
```

```
; CURRENT APPLICATION NUMBER: US/10/372,730
; CURRENT FILING DATE: 2003-02-24
; PRIOR APPLICATION NUMBER: EP02004331.1
; PRIOR FILING DATE: 2002-03-01
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 9
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-372-730-9

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 T0HGIRLPLRSGLGAPLGL 41
Db      22 T0HGIRLPLRSGLGAPLGL 41

RESULT 156
US-10-372-473-1
; Sequence 1, Application US/10372473
; Publication No. US20040005691A1
; GENERAL INFORMATION:
; APPLICANT: Chou, Kuo-Chen
; APPLICANT: Howe, W. Jeffery
; TITLE OF INVENTION: Modified-BACE
; FILE REFERENCE: MBHB 01-1766-A
; CURRENT APPLICATION NUMBER: US/10/372,473
; CURRENT FILING DATE: 2003-02-21
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: MISC FEATURE
; OTHER INFORMATION: Amino acid sequence of human BACE.
US-10-372-473-1

Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      22 T0HGIRLPLRSGLGAPLGL 41
Db      22 T0HGIRLPLRSGLGAPLGL 41

RESULT 157
US-10-652-927-4
; Sequence 4, Application US/10652927
; Publication No. US20040043408A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N3
; CURRENT APPLICATION NUMBER: US/10/652,927
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
```

```
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 4
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-652-927-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPLRSGLGAPLGL 41
Db      22 TQHGIRLPLRSGLGAPLGL 41
```

```
RESULT 158
US-10-652-830-4
/ Sequence 4, Application US/10652830
/ Publication No. US20040048303A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N1
/ CURRENT APPLICATION NUMBER: US/10/652,830
/ CURRENT FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 4
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-652-830-4
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPLRSGLGAPLGL 41
Db      22 TQHGIRLPLRSGLGAPLGL 41
```

```
RESULT 159
US-10-281-092-6
/ Sequence 6, Application US/10281092
/ Publication No. US20040121947A1
/ GENERAL INFORMATION:
/ APPLICANT: Chooh, Arun K.
/ APPLICANT: Tang, Jordan J.N.
/ APPLICANT: Bincer, Geoffrey
/ APPLICANT: Chang, Wanpin
/ APPLICANT: Hong, Lin
/ APPLICANT: Koelsch, Gerald E.
/ APPLICANT: Loy, Jeffrey A.
/ APPLICANT: Turner, Robert T., III
/ APPLICANT: Devasumadrum, Thippeswamy
```

```
/ TITLE OF INVENTION: COMPOUNDS WHICH INHIBIT BETA-SECRETASE
/ FILE REFERENCE: 2932.1001-004
/ CURRENT APPLICATION NUMBER: US/10/281,092
/ CURRENT FILING DATE: 2002-10-23
/ PRIOR APPLICATION NUMBER: US 10/032,818
/ PRIOR FILING DATE: 2001-12-28
/ PRIOR APPLICATION NUMBER: PCT US01/50826
/ PRIOR FILING DATE: 2001-12-28
/ PRIOR APPLICATION NUMBER: US 60/258,705
/ PRIOR FILING DATE: 2000-12-28
/ PRIOR APPLICATION NUMBER: US 60/275,756
/ PRIOR FILING DATE: 2001-03-14
/ PRIOR APPLICATION NUMBER: US 60/335,952
/ PRIOR FILING DATE: 2001-10-23
/ PRIOR APPLICATION NUMBER: US 60/333,545
/ PRIOR FILING DATE: 2001-11-27
/ PRIOR APPLICATION NUMBER: US 60/348,464
/ PRIOR FILING DATE: 2002-01-14
/ PRIOR APPLICATION NUMBER: US 60/348,615
/ PRIOR FILING DATE: 2002-01-14
/ PRIOR APPLICATION NUMBER: US 60/390,804
/ PRIOR FILING DATE: 2002-06-20
/ PRIOR APPLICATION NUMBER: US 60/397,557
/ Remaining Prior Application data removed - See File Wrapper or PALM.
/ NUMBER OF SEQ ID NOS: 59
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 6
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Unknown
/ FEATURE:
/ OTHER INFORMATION: deduced amino acid sequence of memapsin 2
US-10-281-092-6
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPLRSGLGAPLGL 41
Db      22 TQHGIRLPLRSGLGAPLGL 41
```

```
RESULT 160
US-10-466-258-2
/ Sequence 2, Application US/10466258
/ Publication No. US20040132096A1
/ GENERAL INFORMATION:
/ APPLICANT: GLAXO GROUP LIMITED
/ TITLE OF INVENTION: ASSAY
/ FILE REFERENCE: P80966 GCW
/ CURRENT APPLICATION NUMBER: US/10/466,258
/ CURRENT FILING DATE: 2003-07-15
/ NUMBER OF SEQ ID NOS: 13
/ SOFTWARE: Patentln version 3.0
/ SEQ ID NO 2
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-466-258-2
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TQHGIRLPLRSGLGAPLGL 41
Db      22 TQHGIRLPLRSGLGAPLGL 41
```

```
RESULT 161
```

US-10-223-837-1  
; Sequence 1, Application US/10223837  
; Publication No. US20040154049A1  
; GENERAL INFORMATION:  
; APPLICANT: Martin Geppert  
; APPLICANT: James Harper  
; APPLICANT: Max Harrison  
; APPLICANT: Hayon Prosser  
; TITLE OF INVENTION: COMPOUNDS  
; FILE REFERENCE: PG4564US  
; CURRENT APPLICATION NUMBER: US/10/223.837  
; CURRENT FILING DATE: 2002-08-20  
; PRIOR APPLICATION NUMBER: GB0120342.1  
; PRIOR FILING DATE: 2001-08-21  
; PRIOR APPLICATION NUMBER: GB0126732.6  
; PRIOR FILING DATE: 2001-11-11  
; NUMBER OF SEQ ID NOS: 1  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 1  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: homo sapien  
US-10-223-837-1

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 52;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPRLRSGLGAPLGL 41  
Db 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 162  
US-10-652-045-4  
; Sequence 4, Application US/10652045  
; Publication No. US20040166507A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280N2  
; CURRENT APPLICATION NUMBER: US/10/652.045  
; CURRENT FILING DATE: 2003-08-29  
; PRIOR APPLICATION NUMBER: 09/794,925  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 4  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-652-045-4

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 52;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPRLRSGLGAPLGL 41  
Db 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 163  
US-10-343-389A-19  
; Sequence 19, Application US/10343389A  
; Publication No. US20040180417A1  
; GENERAL INFORMATION:  
; APPLICANT: SEIDAH, NABIL G.  
; APPLICANT: CHRISTEN, MICHEL  
; APPLICANT: CROMLISH, JAMES A.  
; TITLE OF INVENTION: SECRETASE/SHELDASE WITH ASP-ASE ACTIVITY ON THE  
; TITLE OF INVENTION: BETA-SITE APP CLEAVING ENZYME (BACE, ASP2, MEMPSIN 2)  
; FILE REFERENCE: GOOD:0270S  
; CURRENT APPLICATION NUMBER: US/10/343.389A  
; CURRENT FILING DATE: 2003-01-30  
; NUMBER OF SEQ ID NOS: 28  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 19  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic  
; OTHER INFORMATION: Peptide  
US-10-343-389A-19

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 52;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPRLRSGLGAPLGL 41  
Db 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 164  
US-10-476-935-4  
; Sequence 4, Application US/10476935  
; Publication No. US20040234976A1  
; GENERAL INFORMATION:  
; APPLICANT: Beinkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M1  
; CURRENT APPLICATION NUMBER: US/10/476.935  
; CURRENT FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 4  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-476-935-4

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 52;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 22 TOHGIRLPRLRSGLGAPLGL 41  
Db 22 TOHGIRLPRLRSGLGAPLGL 41

RESULT 165  
US-10-801-487-2

```
; Sequence 2, Application US/10801487
; Publication No. US20040241792A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281P
; CURRENT APPLICATION NUMBER: US/10/801,487
; CURRENT FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-801-487-2
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Oy      22 TOHGIRLPLRSGIGGAPLGL 41
        |||
Db      22 TOHGIRLPLRSGIGGAPLGL 41
```

```
RESULT 166
US-10-723-860-285
; Sequence 285, Application US/10723860
; Publication No. US20040253606A1
; GENERAL INFORMATION:
; APPLICANT: Aziz, Nacasha
; APPLICANT: Ginsburg, Wendy M.
; APPLICANT: Zlocznik, Albert
; TITLE OF INVENTION: Methods of Diagnosis of Soft Tissue Sarcoma, Compositions &
; FILE REFERENCE: 05882.0193.INVS01
; CURRENT APPLICATION NUMBER: US/10/723,860
; CURRENT FILING DATE: 2003-11-26
; PRIOR APPLICATION NUMBER: 60/429,739
; PRIOR FILING DATE: 2002-11-26
; NUMBER OF SEQ ID NOS: 8393
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 285
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-723-860-285
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Oy      22 TOHGIRLPLRSGIGGAPLGL 41
        |||
Db      22 TOHGIRLPLRSGIGGAPLGL 41
```

```
RESULT 167
US-10-801-938-2
; Sequence 2, Application US/10801938
; Publication No. US20040253706A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281D
; CURRENT APPLICATION NUMBER: US/10/801,938
; CURRENT FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
```

```
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-801-938-2
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Oy      22 TOHGIRLPLRSGIGGAPLGL 41
        |||
Db      22 TOHGIRLPLRSGIGGAPLGL 41
```

```
RESULT 168
US-10-801-509-2
; Sequence 2, Application US/10801509
; Publication No. US20040254341A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281C
; CURRENT APPLICATION NUMBER: US/10/801,509
; CURRENT FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-801-509-2
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
Oy      22 TOHGIRLPLRSGIGGAPLGL 41
        |||
Db      22 TOHGIRLPLRSGIGGAPLGL 41
```

```
RESULT 169
US-10-801-486-2
; Sequence 2, Application US/10801486
; Publication No. US20040254342A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281B
; CURRENT APPLICATION NUMBER: US/10/801,486
; CURRENT FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-801-486-2
```

```
Query Match          100.0%; Score 104; DB 1; Length 501;
```

Best Local Similarity 100.0%; Pred. No. 52;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41  
|||||  
Db 22 TQHGIRLPLRSGLGAPLGL 41

## RESULT 170

US-10-837-021A-1  
; Sequence 1, Application US/10837021A  
; Publication No. US20040265965A1  
; GENERAL INFORMATION:  
; APPLICANT: Anderson, John P  
; APPLICANT: McConlogue, Lisa  
; APPLICANT: Baal, Guribai  
; APPLICANT: Sinha, Sukarno  
; TITLE OF INVENTION: Glycosylation Variants of BACE  
; FILE REFERENCE: MBH-03-268-A  
; CURRENT APPLICATION NUMBER: US/10/837,021A  
; CURRENT FILING DATE: 2004-04-30  
; PRIOR APPLICATION NUMBER: 60/467,509  
; PRIOR FILING DATE: 2003-05-02  
; NUMBER OF SEQ ID NOS: 12  
; SOFTWARE: PatentIn version 3.3  
; SEQ ID NO 1  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
; FEATURE:  
; NAME/KEY: MISC FEATURE  
; OTHER INFORMATION: Amino acid sequence of human wildtype BACE  
US-10-837-021A-1

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 52;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41  
|||||  
Db 22 TQHGIRLPLRSGLGAPLGL 41

## RESULT 171

US-10-940-867-4  
; Sequence 4, Application US/10940867  
; Publication No. US20050026256A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Helmricksen, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; APPLICANT: Pharmacia & Upjohn Company  
; TITLE OF INVENTION: Alzheimer's Disease Secretase  
; FILE REFERENCE: 6177.PCPA  
; CURRENT APPLICATION NUMBER: US/10/940,867  
; CURRENT FILING DATE: 2004-09-14  
; PRIOR APPLICATION NUMBER: US 09/806,194  
; PRIOR FILING DATE: 2001-03-26  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 49  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 4  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-940-867-4

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 52;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41  
|||||  
Db 22 TQHGIRLPLRSGLGAPLGL 41

## RESULT 172

US-10-726-967A-1  
; Sequence 1, Application US/10726967A  
; Publication No. US20050074456A1  
; GENERAL INFORMATION:  
; APPLICANT: Ballinger, Marcus  
; TITLE OF INVENTION: Constructs for Homogenously Processed Preparations of Beta Site  
; FILE REFERENCE: 2004345-0021  
; CURRENT APPLICATION NUMBER: US/10/726,967A  
; CURRENT FILING DATE: 2003-12-02  
; NUMBER OF SEQ ID NOS: 110  
; SOFTWARE: PatentIn version 3.2  
; SEQ ID NO 1  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Artificial  
; FEATURE:  
; OTHER INFORMATION: Full length human BACE1 isoform A  
US-10-726-967A-1

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 52;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41  
|||||  
Db 22 TQHGIRLPLRSGLGAPLGL 41

## RESULT 173

US-10-477-076-4  
; Sequence 4, Application US/10477076  
; Publication No. US20050080232A1  
; GENERAL INFORMATION:  
; APPLICANT: Beinowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M2  
; CURRENT APPLICATION NUMBER: US/10/477,076  
; CURRENT FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 4  
; LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-477-076-4

Query Match 100.0%; Score 104; DB 1; Length 501;  
Best Local Similarity 100.0%; Pred. No. 52;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 22 TQHGIRLPLRSGLGAPLGL 41  
|||||  
Db 22 TQHGIRLPLRSGLGAPLGL 41

```
RESULT 174
US-10-801-493-2
; Sequence 2, Application US/10801493
; Publication No. US20050096457A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
; FILE REFERENCE: 29915/00281E
; CURRENT APPLICATION NUMBER: US/10/801,493
; CURRENT FILING DATE: 2004-03-16
; PRIOR APPLICATION NUMBER: 09/908,943
; PRIOR FILING DATE: 2001-07-19
; PRIOR APPLICATION NUMBER: 60/219,795
; PRIOR FILING DATE: 2000-07-19
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-801-493-2
```

```
Query Match      100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TGGGIRLPLRSGIGGAPLGL 41
DB      22 TGGGIRLPLRSGIGGAPLGL 41
```

```
RESULT 175
US-10-829-717-2
; Sequence 2, Application US/10829717
; Publication No. US20050101556A1
; GENERAL INFORMATION:
; APPLICANT: CHAPMAN, CONRAD G.
; APPLICANT: MURPHY, KAY
; APPLICANT: POWELL, DAVID J.
; APPLICANT: SMITH, TRUDI S.
; TITLE OF INVENTION: ASP 2
; FILE REFERENCE: GH-70368-2
; CURRENT APPLICATION NUMBER: US/10/829,717
; CURRENT FILING DATE: 2004-04-22
; PRIOR APPLICATION NUMBER: US/10/308,365
; PRIOR FILING DATE: 2002-12-03
; PRIOR APPLICATION NUMBER: US/09/694,200
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: UK 9701684.4
; PRIOR FILING DATE: 1997-01-28
; PRIOR APPLICATION NUMBER: 09/009,191
; PRIOR FILING DATE: 1998-01-20
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: HOMO SAPIENS
US-10-829-717-2
```

```
Query Match      100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TGGGIRLPLRSGIGGAPLGL 41
DB      22 TGGGIRLPLRSGIGGAPLGL 41
```

```
RESULT 176
US-10-466-391A-2
; Sequence 2, Application US/10466391A
```

```
; Publication No. US2004014653A1
; GENERAL INFORMATION:
; APPLICANT: GLAXO GROUP LIMITED
; TITLE OF INVENTION: ASSAY
; FILE REFERENCE: P80965 GCM
; CURRENT APPLICATION NUMBER: US/10/466,391A
; CURRENT FILING DATE: 2003-07-15
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-466-391A-2
```

```
Query Match      100.0%; Score 104; DB 1; Length 501;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TGGGIRLPLRSGIGGAPLGL 41
DB      22 TGGGIRLPLRSGIGGAPLGL 41
```

```
RESULT 177
US-09-796-264-3
; Sequence 3, Application US/09796264
; Patent No. US20020049303A1
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Iah, Xinh
; APPLICANT: Koelsch, Gerald
; TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
; FILE REFERENCE: Of Use Thereof
; CURRENT APPLICATION NUMBER: US/09/796,264
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/604,608
; PRIOR FILING DATE: 2000-06-27
; PRIOR APPLICATION NUMBER: 60/168,060
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: 60/177,836
; PRIOR FILING DATE: 2000-01-25
; PRIOR APPLICATION NUMBER: 60/178,368
; PRIOR FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: 60/210,292
; PRIOR FILING DATE: 2000-06-08
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 503
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; OTHER INFORMATION: Pro-memapsin 2
; OTHER INFORMATION: Amino Acids 1-15 are vector-derived residues
; OTHER INFORMATION: Amino Acids 16-64 are a putative pro peptide
; OTHER INFORMATION: Amino Acids 1-13 are the T7 promoter
; OTHER INFORMATION: Amino Acids 16-456 are Pro-memapsin 2-T1
; OTHER INFORMATION: Amino Acids 16-421 are Promemapsin 2-T2
US-09-796-264-3
```

```
Query Match      100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

```
QY      22 TGGGIRLPLRSGIGGAPLGL 41
DB      24 TGGGIRLPLRSGIGGAPLGL 43
```

```
RESULT 178
US-09-845-226-3
```



```
; Sequence 3, Application US/09845226
; Patent No. US20020115600A1
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Hong, Lin
; APPLICANT: Ghosh, Arun K.
; TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
; FILE REFERENCE: OMRF 182
; CURRENT APPLICATION NUMBER: US/09/845,226
; CURRENT FILING DATE: 2001-04-30
; PRIOR APPLICATION NUMBER: 09/603,713
; PRIOR FILING DATE: 2000-06-27
; PRIOR APPLICATION NUMBER: 60/168,060
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: 60/177,836
; PRIOR FILING DATE: 2000-01-25
; PRIOR APPLICATION NUMBER: 60/178,368
; PRIOR FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: 60/210,292
; PRIOR FILING DATE: 2000-06-08
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 503
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; OTHER INFORMATION: Pro-memapsin 2
; OTHER INFORMATION: Amino Acids 1-15 are vector-derived residues
; OTHER INFORMATION: Amino Acids 16-64 are a putative pro peptide
; OTHER INFORMATION: Amino Acids 1-13 are the T7 promoter
; OTHER INFORMATION: Amino Acids 16-456 are Pro-memapsin 2-T1
; OTHER INFORMATION: Amino Acids 16-421 are Promemapsin 2-T2
; US-09-845-226-3

Query Match          100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAPLGL 41
      |||||||||||||||||||
Db      24 TQHGIRLPRLRSGLGAPLGL 43

RESULT 179
US-09-795-903A-3
; Sequence 3, Application US/09795903A
; Patent No. US2002016760A1
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Lin, Xinli
; APPLICANT: Koelsch, Gerald
; TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
; FILE REFERENCE: OMRF 179
; CURRENT APPLICATION NUMBER: US/09/795,903A
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/604,608
; PRIOR FILING DATE: 2000-06-27
; PRIOR APPLICATION NUMBER: 60/168,060
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: 60/177,836
; PRIOR FILING DATE: 2000-01-25
; PRIOR APPLICATION NUMBER: 60/178,368
; PRIOR FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: 60/210,292
; PRIOR FILING DATE: 2000-06-08
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 503
; TYPE: PRT
; ORGANISM: Homo sapiens
```

```
; FEATURE:
; OTHER INFORMATION: Pro-memapsin 2
; OTHER INFORMATION: Amino Acids 1-15 are vector-derived residues
; OTHER INFORMATION: Amino Acids 16-64 are a putative pro peptide
; OTHER INFORMATION: Amino Acids 1-13 are the T7 promoter
; OTHER INFORMATION: Amino Acids 16-456 are Pro-memapsin 2-T1
; OTHER INFORMATION: Amino Acids 16-421 are Promemapsin 2-T2
; US-09-795-903A-3

Query Match          100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAPLGL 41
      |||||||||||||||||||
Db      24 TQHGIRLPRLRSGLGAPLGL 43

RESULT 180
US-10-032-818-3
; Sequence 3, Application US/10032818
; Publication No. US20030092629A1
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Koelsch, Gerald
; APPLICANT: Ghosh, Arun K.
; TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
; FILE REFERENCE: 2932.1006-007
; CURRENT APPLICATION NUMBER: US/10/032,818
; CURRENT FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: US 60/275,756
; PRIOR FILING DATE: 2001-03-14
; PRIOR APPLICATION NUMBER: US 60/258,705
; PRIOR FILING DATE: 2000-12-28
; NUMBER OF SEQ ID NOS: 83
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 3
; LENGTH: 503
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-10-032-818-3

Query Match          100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TQHGIRLPRLRSGLGAPLGL 41
      |||||||||||||||||||
Db      24 TQHGIRLPRLRSGLGAPLGL 43

RESULT 181
US-10-820-953-3
; Sequence 3, Application US/10820953
; Publication No. US20040167075A1
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Ghosh, Arun K.
; APPLICANT: Koelsch, Arun K.
; TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
; FILE REFERENCE: OMRF 182
; CURRENT APPLICATION NUMBER: US/10/820,953
; CURRENT FILING DATE: 2004-04-08
; PRIOR APPLICATION NUMBER: US/09/603,713
; PRIOR FILING DATE: 2000-06-27
; PRIOR APPLICATION NUMBER: 60/141,363
; PRIOR FILING DATE: 1999-06-28
; PRIOR APPLICATION NUMBER: 60/168,060
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: 60/177,836
; PRIOR FILING DATE: 2000-01-25
; PRIOR APPLICATION NUMBER: 60/178,368
; PRIOR FILING DATE: 2000-01-27
```

```

; PRIOR APPLICATION NUMBER: 60/210,292
; PRIOR FILING DATE: 2000-06-08
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 503
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; OTHER INFORMATION: pro-memapsin 2
; OTHER INFORMATION: Amino Acids 1-15 are vector-derived residues
; OTHER INFORMATION: Amino Acids 16-64 are a putative pro peptide
; OTHER INFORMATION: Amino Acids 1-13 are the T7 promoter
; OTHER INFORMATION: Amino Acids 16-456 are Pro-memapsin 2-T1
; OTHER INFORMATION: Amino Acids 16-421 are Promemapsin 2-T2
US-10-820-953-3

Query Match      100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TOHGIRLPLRSGIGGAPLGL 41
Db      24 TOHGIRLPLRSGIGGAPLGL 43

RESULT 182
US-10-773-754-3
; Sequence 3, Application US/10773754
; Publication No. US20040220079A1
; GENERAL INFORMATION:
; APPLICANT: Koelisch, Gerald
; APPLICANT: Tang, Jordan J. N.
; APPLICANT: Hong, Lin
; APPLICANT: Choesh, Arun K.
; APPLICANT: The Board of Trustees of the University of Illinois
; TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
; FILE REFERENCE: 022266-000930US
; CURRENT FILING DATE: 2004-02-06
; PRIOR APPLICATION NUMBER: US/10/773,754
; PRIOR FILING DATE: 2004-02-06
; PRIOR APPLICATION NUMBER: US 60/141,363
; PRIOR FILING DATE: 1999-06-28
; PRIOR APPLICATION NUMBER: US 60/168,060
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: US 60/177,836
; PRIOR FILING DATE: 2000-01-25
; PRIOR APPLICATION NUMBER: US 60/178,368
; PRIOR FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: US 60/210,292
; PRIOR FILING DATE: 2000-06-08
; PRIOR APPLICATION NUMBER: US 09/603,713
; PRIOR FILING DATE: 2000-06-27
; PRIOR APPLICATION NUMBER: US 09/845,226
; PRIOR FILING DATE: 2001-04-30
; NUMBER OF SEQ ID NOS: 39
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 503
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; OTHER INFORMATION: pro-memapsin 2
; OTHER INFORMATION: amino acids 1-13 are the T7 promoter
; OTHER INFORMATION: amino acids 1-15 are vector-derived residues
; OTHER INFORMATION: Amino acids 16-64 are a putative pro-peptide
; OTHER INFORMATION: amino acids 16-456 are pro-memapsin 2 T1
; OTHER INFORMATION: amino acids 16-421 are promemapsin 2 T2
```

```

US-10-773-754-3

Query Match      100.0%; Score 104; DB 1; Length 503;
Best Local Similarity 100.0%; Pred. No. 52;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TOHGIRLPLRSGIGGAPLGL 41
Db      24 TOHGIRLPLRSGIGGAPLGL 43

RESULT 183
US-10-275-339A-7
; Sequence 7, Application US/10275339A
; Publication No. US20040110743A1
; GENERAL INFORMATION:
; APPLICANT: MIYAMOTO, Masaomi
; APPLICANT: MATSUI, Junji
; APPLICANT: FUKUMOTO, Hiroaki
; APPLICANT: TAKUI, Naoki
; TITLE OF INVENTION: Beta Secretase Inhibitors
; FILE REFERENCE: 2729 USOP
; CURRENT APPLICATION NUMBER: US/10/275,339A
; CURRENT FILING DATE: 2003-10-30
; PRIOR APPLICATION NUMBER: PCT/JP01/04144
; PRIOR FILING DATE: 2001-05-18
; PRIOR APPLICATION NUMBER: JP 2000-152758
; PRIOR FILING DATE: 2000-05-19
; NUMBER OF SEQ ID NOS: 9
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 7
; LENGTH: 509
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-275-339A-7

Query Match      100.0%; Score 104; DB 1; Length 509;
Best Local Similarity 100.0%; Pred. No. 53;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      22 TOHGIRLPLRSGIGGAPLGL 41
Db      22 TOHGIRLPLRSGIGGAPLGL 41

RESULT 184
US-09-794-927-8
; Sequence 8, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bleskowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/62809C
; CURRENT APPLICATION NUMBER: US/09/794,927
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
```

SEQ ID NO 8  
LENGTH: 501  
TYPE: PRT  
ORGANISM: Mus musculus  
US-09-794-927-8

Query Match 74.0%; Score 77; DB 1; Length 501;  
Best Local Similarity 80.0%; Pred. No. 1.3e+02;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 22 TQHGIRLPLRSGLAGPPLGL 41  
Db 22 THLGIRLPLRSGLAGPPLGL 41

RESULT 185  
US-09-795-847-8  
Sequence 8, Application US/09795847  
Patent No. US20010018208A1  
GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280DE  
CURRENT FILING DATE: 2001-02-28  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 8  
LENGTH: 501  
TYPE: PRT  
ORGANISM: Mus musculus  
US-09-795-847-8

Query Match 74.0%; Score 77; DB 1; Length 501;  
Best Local Similarity 80.0%; Pred. No. 1.3e+02;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 22 TQHGIRLPLRSGLAGPPLGL 41  
Db 22 THLGIRLPLRSGLAGPPLGL 41

RESULT 186  
US-09-794-743-8  
Sequence 8, Application US/09794743  
Patent No. US20010021391A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280BC  
CURRENT APPLICATION NUMBER: US/09/794,743

CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 8  
LENGTH: 501  
TYPE: PRT  
ORGANISM: Mus musculus  
US-09-794-743-8

Query Match 74.0%; Score 77; DB 1; Length 501;  
Best Local Similarity 80.0%; Pred. No. 1.3e+02;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 22 TQHGIRLPLRSGLAGPPLGL 41  
Db 22 THLGIRLPLRSGLAGPPLGL 41

RESULT 187  
US-09-794-748-8  
Sequence 8, Application US/09794748  
Patent No. US20020037315A1  
GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280JL  
CURRENT APPLICATION NUMBER: US/09/794,748  
CURRENT FILING DATE: 2001-02-27  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 8  
LENGTH: 501  
TYPE: PRT  
ORGANISM: Mus musculus  
US-09-794-748-8

Query Match 74.0%; Score 77; DB 1; Length 501;  
Best Local Similarity 80.0%; Pred. No. 1.3e+02;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 22 TQHGIRLPLRSGLAGPPLGL 41  
Db 22 THLGIRLPLRSGLAGPPLGL 41

RESULT 188  
US-09-794-925-8

```
/ Sequence 8, Application US/09794925
/ Patent No. US20020064819A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-09-794-925-8

Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      22 THGIRLPLRSGLAGPGL 41
Db      22 THGIRLPLRSGLAGPGL 41

RESULT 189
US-09-681-442-8
/ Sequence 8, Application US/09681442
/ Patent No. US20020081634A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280FG
/ CURRENT APPLICATION NUMBER: US/09/681,442
/ PRIOR FILING DATE: 2001-04-05
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-09-681-442-8
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      22 THGIRLPLRSGLAGPGL 41
Db      22 THGIRLPLRSGLAGPGL 41

RESULT 190
US-09-869-414-8
/ Sequence 8, Application US/09869414
/ Publication No. US20030077226A1
/ GENERAL INFORMATION:
/ APPLICANT: Bienkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M
/ CURRENT APPLICATION NUMBER: US/09/869,414
/ PRIOR FILING DATE: 2001-06-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-09-869-414-8

Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY      22 THGIRLPLRSGLAGPGL 41
Db      22 THGIRLPLRSGLAGPGL 41

RESULT 191
US-09-548-366-8
/ Sequence 8, Application US/09548366
/ Publication No. US20030104365A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES THEREFOR
/ FILE REFERENCE: 28341/6280A
/ CURRENT APPLICATION NUMBER: US/09/548,366
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 65
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 8
```

LENGTH: 501  
; TYPE: PRT  
; ORGANISM: Mus musculus  
US-09-548-366-8

Query Match 74.0%; Score 77; DB 1; Length 501;  
Best Local Similarity 80.0%; Pred. No. 1.3e+02;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLRSGLAGPPLGL 41  
Db 22 THLGIRLPRLRSGLAGPPLGL 41

RESULT 192  
US-10-652-927-8  
; Sequence 8, Application US/10652927  
; Publication No. US20040043408A1  
; GENERAL INFORMATION:

APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N3  
CURRENT FILING DATE: 2003-08-29  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 8  
LENGTH: 501  
TYPE: PRT  
; ORGANISM: Mus musculus  
US-10-652-927-8

Query Match 74.0%; Score 77; DB 1; Length 501;  
Best Local Similarity 80.0%; Pred. No. 1.3e+02;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLRSGLAGPPLGL 41  
Db 22 THLGIRLPRLRSGLAGPPLGL 41

RESULT 193  
US-10-652-830-8

; Sequence 8, Application US/10652830  
; Publication No. US20040048303A1  
; GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N1  
CURRENT FILING DATE: 2003-08-29  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 8  
LENGTH: 501  
TYPE: PRT  
; ORGANISM: Mus musculus  
US-10-652-830-8

Query Match 74.0%; Score 77; DB 1; Length 501;  
Best Local Similarity 80.0%; Pred. No. 1.3e+02;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLRSGLAGPPLGL 41  
Db 22 THLGIRLPRLRSGLAGPPLGL 41

RESULT 194  
US-10-652-045-8  
; Sequence 8, Application US/10652045  
; Publication No. US20040166507A1  
; GENERAL INFORMATION:

APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N2  
CURRENT FILING DATE: 2003-08-29  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 8  
LENGTH: 501  
TYPE: PRT  
; ORGANISM: Mus musculus  
US-10-652-045-8

Query Match 74.0%; Score 77; DB 1; Length 501;  
Best Local Similarity 80.0%; Pred. No. 1.3e+02;  
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Oy 22 TQHGIRLPRLRSGLAGPPLGL 41  
Db 22 THLGIRLPRLRSGLAGPPLGL 41

RESULT 195  
US-10-476-935-8  
; Sequence 8, Application US/10476935  
; Publication No. US20040234976A1  
; GENERAL INFORMATION:

APPLICANT: Belkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M1  
CURRENT FILING DATE: 2003-11-06  
PRIOR FILING DATE: 2003-11-06  
PRIOR APPLICATION NUMBER: 09/416,901

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/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1998-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-10-476-935-8
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```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
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```
Oy 22 THGIRLPLRSGLAGPPLG 41
Db 22 THGIRLPLRSGLAGPPLG 41
```

```
RESULT 196
US-10-940-867-8
/ Sequence 8, Application US/10940867
/ Publication No. US20050026256A1
/ GENERAL INFORMATION:
/ APPLICANT: Guirney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinlison, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ APPLICANT: Pharmacia & Upjohn Company
/ TITLE OF INVENTION: Alzheimer's Disease Secretase
/ FILE REFERENCE: 6177.PCFA
/ CURRENT APPLICATION NUMBER: US/10/940,867
/ PRIOR FILING DATE: 2004-09-14
/ PRIOR APPLICATION NUMBER: US 09/806,194
/ PRIOR FILING DATE: 2001-03-26
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 49
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-10-940-867-8
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
Oy 22 THGIRLPLRSGLAGPPLG 41
Db 22 THGIRLPLRSGLAGPPLG 41
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```
RESULT 197
US-10-477-076-8
/ Sequence 8, Application US/10477076
/ Publication No. US20050080232A1
/ GENERAL INFORMATION:
/ APPLICANT: Beinowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M2
/ CURRENT APPLICATION NUMBER: US/10/477,076
/ CURRENT FILING DATE: 2003-11-06
```

```
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 8
/ LENGTH: 501
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-10-477-076-8
```

```
Query Match          74.0%; Score 77; DB 1; Length 501;
Best Local Similarity 80.0%; Pred. No. 1.3e+02;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
Oy 22 THGIRLPLRSGLAGPPLG 41
Db 22 THGIRLPLRSGLAGPPLG 41
```

```
RESULT 198
US-10-872-198-12
/ Sequence 12, Application US/10872198
/ Publication No. US20050002897A1
/ GENERAL INFORMATION:
/ APPLICANT: Ulrich HAUPTS
/ APPLICANT: Andre KOLTERMANN
/ APPLICANT: Andreas SCHREIDIG
/ APPLICANT: Christian VOETSMEIER
/ APPLICANT: Ulrich Ketting
/ TITLE OF INVENTION: NEW BIOLOGICAL ENTITIES AND USE THEREOF
/ FILE REFERENCE: 04156.000204
/ CURRENT APPLICATION NUMBER: US/10/872,198
/ PRIOR FILING DATE: 2004-06-18
/ PRIOR APPLICATION NUMBER: 60/543,518
/ PRIOR FILING DATE: 2004-02-11
/ PRIOR APPLICATION NUMBER: 60/524,960
/ PRIOR FILING DATE: 2003-11-25
/ PRIOR APPLICATION NUMBER: EP 04003058
/ PRIOR FILING DATE: 2004-02-11
/ PRIOR APPLICATION NUMBER: EP 03025871
/ PRIOR FILING DATE: 2003-11-11
/ PRIOR APPLICATION NUMBER: EP 03025851
/ PRIOR FILING DATE: 2003-11-10
/ PRIOR APPLICATION NUMBER: EP 03013819
/ PRIOR FILING DATE: 2003-06-18
/ NUMBER OF SEQ ID NOS: 149
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 12
/ LENGTH: 358
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-872-198-12
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```
Query Match          21.2%; Score 22; DB 1; Length 358;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```
Oy 25 GIRLPLRSGLAGPPLG 40
Db 66 GVVVPYTGKWESELG 81
```

```
RESULT 199
US-10-872-197A-12
/ Sequence 12, Application US/10872197A
```

```
Publication No. US20050059126A1
GENERAL INFORMATION:
APPLICANT: Ulrich HAUPRS
APPLICANT: Andre KOLTERMANN
APPLICANT: Andreas SCHEIDIG
APPLICANT: Christian VOTEMEIER
TITLE OF INVENTION: NEW BIOLOGICAL ENTITIES AND USE THEREOF
FILE REFERENCE: 04156.000203
CURRENT FILING DATE: US/10/872,197A
PRIOR FILING DATE: 2004-06-18
PRIOR APPLICATION NUMBER: 60/524,960
PRIOR FILING DATE: 2003-11-25
PRIOR APPLICATION NUMBER: EP 03025871
PRIOR FILING DATE: 2003-11-11
PRIOR APPLICATION NUMBER: EP 03013819
PRIOR FILING DATE: 2003-11-10
NUMBER OF SEQ ID NOS: 96
SOFTWARE: PatentIn version 3.1
SEQ ID NO 12
LENGTH: 358
TYPE: PRT
ORGANISM: Homo sapiens
US-10-872-197A-12

Query Match      21.2% Score 22; DB 1; Length 358;
Best Local Similarity 31.2% Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Oy      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      66 GVVVPTYQKWEGLG 81

RESULT 200
US-10-372-473-4
Sequence 4, Application US/10372473
Publication No. US20040005691A1
GENERAL INFORMATION:
APPLICANT: Chou, Kuo-Chen
APPLICANT: Howe, W. Jeffery
TITLE OF INVENTION: Modified BACE
FILE REFERENCE: MBHB 01-1766-A
CURRENT APPLICATION NUMBER: US/10/372,473
CURRENT FILING DATE: 2003-02-21
NUMBER OF SEQ ID NOS: 24
SOFTWARE: PatentIn version 3.2
SEQ ID NO 4
LENGTH: 391
TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: MISC FEATURE
OTHER INFORMATION: Human beta-secretase.
US-10-372-473-4

Query Match      21.2% Score 22; DB 1; Length 391;
Best Local Similarity 31.2% Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Oy      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      72 GVVVPTYQKWEGLG 87

RESULT 201
US-10-400-273-4
Sequence 4, Application US/10400273
Publication No. US20040014194A1
GENERAL INFORMATION:
APPLICANT: Beyer, Brian
APPLICANT: Hammond, Gerald S
APPLICANT: Reichert, Paul
```

```
APPLICANT: Strickland, Corey
APPLICANT: Wang, Wenyan
APPLICANT: Weber, Patricia C
APPLICANT: Wong, Gwendolyn
APPLICANT: Zhang, Lili
TITLE OF INVENTION: BETA-SECRETASE CRYSTALS AND METHODS FOR PREPARING AND USING THE S
FILE REFERENCE: JBO1531-K-US
CURRENT APPLICATION NUMBER: US/10/400,273
CURRENT FILING DATE: 2003-03-26
PRIOR FILING DATE: 2002-03-27
PRIOR APPLICATION NUMBER: 60/367,937
NUMBER OF SEQ ID NOS: 5
SOFTWARE: PatentIn version 3.1
SEQ ID NO 4
LENGTH: 403
TYPE: PRT
ORGANISM: Homo sapiens
US-10-400-273-4

Query Match      21.2% Score 22; DB 1; Length 403;
Best Local Similarity 31.2% Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Oy      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      80 GVVVPTYQKWEGLG 95

RESULT 202
US-10-837-021A-2
Sequence 2, Application US/10837021A
Publication No. US20040265965A1
GENERAL INFORMATION:
APPLICANT: Anderson, John P
APPLICANT: McConlogue, Lisa
APPLICANT: Basl, Guritbal
APPLICANT: Sinha, Sukatno
TITLE OF INVENTION: Glycosylation Variants of BACE
FILE REFERENCE: MBHB-03-268-A
CURRENT APPLICATION NUMBER: US/10/837,021A
CURRENT FILING DATE: 2004-04-30
PRIOR APPLICATION NUMBER: 60/467,509
PRIOR FILING DATE: 2003-05-02
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PatentIn version 3.3
SEQ ID NO 2
LENGTH: 406
TYPE: PRT
ORGANISM: Artificial
FEATURE:
OTHER INFORMATION: Human BACE with asparagine to alanine (N223A) mutation.
US-10-837-021A-2

Query Match      21.2% Score 22; DB 1; Length 406;
Best Local Similarity 31.2% Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Oy      25 GIRLPLRSGLGAPLG 40
      | : | | | | |
Db      82 GVVVPTYQKWEGLG 97

RESULT 203
US-10-837-021A-3
Sequence 3, Application US/10837021A
Publication No. US20040265965A1
GENERAL INFORMATION:
APPLICANT: Anderson, John P
APPLICANT: McConlogue, Lisa
APPLICANT: Basl, Guritbal
APPLICANT: Sinha, Sukatno
TITLE OF INVENTION: Glycosylation Variants of BACE
FILE REFERENCE: MBHB-03-268-A
```

```
/ CURRENT APPLICATION NUMBER: US/10/837,021A
/ CURRENT FILING DATE: 2004-04-30
/ PRIOR APPLICATION NUMBER: 60/467,509
/ PRIOR FILING DATE: 2003-05-02
/ NUMBER OF SEQ ID NOS: 12
/ SOFTWARE: PatentIn version 3.3
/ SEQ ID NO 3
/ LENGTH: 406
/ TYPE: PRT
/ ORGANISM: Artificial
/ FEATURE:
/ OTHER INFORMATION: Human BACE with serine to isoleucine (S174I) and asparagine to
US-10-837-021A-3 mutations.
```

```
Query Match      21.2% Score 22; DB 1; Length 406;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```
QY      25 GIRLPURSGLGAPLG 40
      | : | | | | |
Db      82 GVVVPYTGKWEGLG 97
```

```
RESULT 204
US-10-837-021A-4
/ Sequence 4, Application US/10837021A
/ Publication No. US20040265965A1
/ GENERAL INFORMATION:
/ APPLICANT: Anderson, John P
/ APPLICANT: McConlogue, Lisa
/ APPLICANT: Bael, Gurigbal
/ APPLICANT: Sinha, Sukatno
/ TITLE OF INVENTION: Glycosylation Variants of BACE
/ FILE REFERENCE: MBHB-03-268-A
/ CURRENT APPLICATION NUMBER: US/10/837,021A
/ CURRENT FILING DATE: 2004-04-30
/ PRIOR APPLICATION NUMBER: 60/467,509
/ PRIOR FILING DATE: 2003-05-02
/ NUMBER OF SEQ ID NOS: 12
/ SOFTWARE: PatentIn version 3.3
/ SEQ ID NO 4
/ LENGTH: 406
/ TYPE: PRT
/ ORGANISM: Artificial
/ FEATURE:
/ OTHER INFORMATION: Human BACE with serine to isoleucine (S174I), asparagine to
US-10-837-021A-4 and asparagine to alanine (N223A) mutations.
```

```
Query Match      21.2% Score 22; DB 1; Length 406;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```
QY      25 GIRLPURSGLGAPLG 40
      | : | | | | |
Db      82 GVVVPYTGKWEGLG 97
```

```
RESULT 205
US-10-837-021A-5
/ Sequence 5, Application US/10837021A
/ Publication No. US20040265965A1
/ GENERAL INFORMATION:
/ APPLICANT: Anderson, John P
/ APPLICANT: McConlogue, Lisa
/ APPLICANT: Bael, Gurigbal
/ APPLICANT: Sinha, Sukatno
/ TITLE OF INVENTION: Glycosylation Variants of BACE
/ FILE REFERENCE: MBHB-03-268-A
/ CURRENT APPLICATION NUMBER: US/10/837,021A
/ CURRENT FILING DATE: 2004-04-30
/ PRIOR APPLICATION NUMBER: 60/467,509
```

```
/ PRIOR FILING DATE: 2003-05-02
/ NUMBER OF SEQ ID NOS: 12
/ SOFTWARE: PatentIn version 3.3
/ SEQ ID NO 5
/ LENGTH: 406
/ TYPE: PRT
/ ORGANISM: Artificial
/ FEATURE:
/ OTHER INFORMATION: Human BACE with serine to isoleucine (S174I), asparagine to
US-10-837-021A-5 and asparagine to alanine (N223A) mutations.
```

```
Query Match      21.2% Score 22; DB 1; Length 406;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```
QY      25 GIRLPURSGLGAPLG 40
      | : | | | | |
Db      82 GVVVPYTGKWEGLG 97
```

```
RESULT 206
US-10-400-273-5
/ Sequence 5, Application US/10400273
/ Publication No. US20040014194A1
/ GENERAL INFORMATION:
/ APPLICANT: Beyer, Brian
/ APPLICANT: Hammond, Gerald S
/ APPLICANT: Reichert, Paul
/ APPLICANT: Strickland, Corey
/ APPLICANT: Wang, Wenyuan
/ APPLICANT: Weber, Patricia C
/ APPLICANT: Wong, Gwendolyn
/ APPLICANT: Zhang, Lili
/ TITLE OF INVENTION: BETA-SECRETASE CRYSTALS AND METHODS FOR PREPARING AND USING THE S
/ FILE REFERENCE: JB01531-K-US
/ CURRENT APPLICATION NUMBER: US/10/400,273
/ CURRENT FILING DATE: 2003-03-26
/ PRIOR APPLICATION NUMBER: 60/367,937
/ PRIOR FILING DATE: 2002-03-27
/ NUMBER OF SEQ ID NOS: 5
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 5
/ LENGTH: 408
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-400-273-5
```

```
Query Match      21.2% Score 22; DB 1; Length 408;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```
QY      25 GIRLPURSGLGAPLG 40
      | : | | | | |
Db      85 GVVVPYTGKWEGLG 100
```

```
RESULT 207
US-10-400-273-1
/ Sequence 1, Application US/10400273
/ Publication No. US20040014194A1
/ GENERAL INFORMATION:
/ APPLICANT: Beyer, Brian
/ APPLICANT: Hammond, Gerald S
/ APPLICANT: Reichert, Paul
/ APPLICANT: Strickland, Corey
/ APPLICANT: Wang, Wenyuan
/ APPLICANT: Weber, Patricia C
/ APPLICANT: Wong, Gwendolyn
/ APPLICANT: Zhang, Lili
/ TITLE OF INVENTION: BETA-SECRETASE CRYSTALS AND METHODS FOR PREPARING AND USING THE S
/ FILE REFERENCE: JB01531-K-US
```



```

; CURRENT APPLICATION NUMBER: US/10/400,273
; CURRENT FILING DATE: 2003-03-26
; PRIOR APPLICATION NUMBER: 60/367,937
; PRIOR FILING DATE: 2002-03-27
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 411
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-400-273-1

Query Match          21.2%  Score 22; DB 1; Length 411;
Best Local Similarity 31.2%  Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY      25 GIRLPRLRSGLGAPLG 40
Db      82 GVVYPYTGKWEGLG 97

RESULT 208
US-10-627-473-19
; Sequence 19, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; TITLE OF INVENTION: (BACK) AND METHODS OF USE THEREOF
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 19
; LENGTH: 411
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-627-473-19

Query Match          21.2%  Score 22; DB 1; Length 411;
Best Local Similarity 31.2%  Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY      25 GIRLPRLRSGLGAPLG 40
Db      85 GVVYPYTGKWEGLG 100

RESULT 209
US-10-627-473-20
; Sequence 20, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; TITLE OF INVENTION: (BACK) AND METHODS OF USE THEREOF
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681

; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 20
; LENGTH: 411
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-627-473-20

Query Match          21.2%  Score 22; DB 1; Length 411;
Best Local Similarity 31.2%  Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY      25 GIRLPRLRSGLGAPLG 40
Db      85 GVVYPYTGKWEGLG 100

RESULT 210
US-10-281-092-9
; Sequence 9, Application US/10281092
; Publication No. US20040121947A1
; GENERAL INFORMATION:
; APPLICANT: Ghosh, Arun K.
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Bilcer, Geoffrey
; APPLICANT: Chang, Wainpin
; APPLICANT: Hong, Lin
; APPLICANT: Koelsch, Gerald E.
; APPLICANT: Loy, Jeffrey A.
; APPLICANT: Turner, Robert T., III
; APPLICANT: Devasumadrum, Thippeswamy
; TITLE OF INVENTION: COMPOUNDS WHICH INHIBIT BETA-SECRETASE
; TITLE OF INVENTION: ACTIVITY AND METHODS OF USE THEREOF
; FILE REFERENCE: 2932.1001-004
; CURRENT APPLICATION NUMBER: US/10/281,092
; CURRENT FILING DATE: 2002-10-23
; PRIOR APPLICATION NUMBER: US 10/032,818
; PRIOR FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: PCT US01/50826
; PRIOR FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: US 60/258,705
; PRIOR FILING DATE: 2000-12-28
; PRIOR APPLICATION NUMBER: US 60/275,756
; PRIOR FILING DATE: 2001-03-14
; PRIOR APPLICATION NUMBER: US 60/335,952
; PRIOR FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: US 60/333,545
; PRIOR FILING DATE: 2001-11-27
; PRIOR APPLICATION NUMBER: US 60/348,464
; PRIOR FILING DATE: 2002-01-14
; PRIOR APPLICATION NUMBER: US 60/348,615
; PRIOR FILING DATE: 2002-01-14
; PRIOR APPLICATION NUMBER: US 60/390,804
; PRIOR FILING DATE: 2002-06-20
; PRIOR APPLICATION NUMBER: US 60/397,557
; PRIOR FILING DATE: 2002-07-19
; Remaining Prior Application data removed - See File wrapper or PALM.
; NUMBER OF SEQ ID NOS: 59
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 9
; LENGTH: 414
; TYPE: PRT
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: memapsin 2
US-10-281-092-9

Query Match          21.2%  Score 22; DB 1; Length 414;
Best Local Similarity 31.2%  Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY      25 GIRLPRLRSGLGAPLG 40
```



```
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-743-28
```

```
Query Match 21.2% Score 22; DB 1; Length 425;
Best Local Similarity 31.2% Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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```
Qy 25 GIRLPLRSGLCGAPLG 40
| : : | | |
Db 99 GVVVPTQKKWEGELG 114
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```
RESULT 215
US-09-794-748-28
; Sequence 28, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yano, Rikdang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/62801JL
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-748-28
```

```
Query Match 21.2% Score 22; DB 1; Length 425;
Best Local Similarity 31.2% Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```
Qy 25 GIRLPLRSGLCGAPLG 40
| : : | | |
Db 99 GVVVPTQKKWEGELG 114
```

```
RESULT 216
US-09-794-925-28
; Sequence 28, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
US-09-794-925-28
```

```
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yano, Rikdang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/62801H1
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-794-925-28
```

```
Query Match 21.2% Score 22; DB 1; Length 425;
Best Local Similarity 31.2% Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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```
Qy 25 GIRLPLRSGLCGAPLG 40
| : : | | |
Db 99 GVVVPTQKKWEGELG 114
```

```
RESULT 217
US-09-681-442-28
; Sequence 28, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yano, Rikdang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280FG
; CURRENT FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-681-442-28
```

```
Query Match 21.2% Score 22; DB 1; Length 425;
Best Local Similarity 31.2% Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
```

```
Qy 25 GIRLPLRSGLCGAPLG 40
| : : | | |
```

Db 99 GVVVPYTGKMEGELG 114

## RESULT 218

US-09-869-414-28  
; Sequence 28, Application US/09869414  
; Publication No. US20030077226A1  
; GENERAL INFORMATION:  
; APPLICANT: Bienkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M  
; CURRENT APPLICATION NUMBER: US/09/869,414  
; PRIOR FILING DATE: 2001-06-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 28  
; LENGTH: 425  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-869-414-28

Query Match 21.2%; Score 22; DB 1; Length 425;  
Best Local Similarity 31.2%; Pred. No. 2.3e+02;  
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY 25 GIRLPLRSGLGAPLG 40  
| : | | | | |  
Db 99 GVVVPYTGKMEGELG 114

## RESULT 219

US-09-548-366-28  
; Sequence 28, Application US/09548366  
; Publication No. US20030104365A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrikson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
; FILE REFERENCE: 28341/6280A  
; CURRENT APPLICATION NUMBER: US/09/548,366  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 28  
; LENGTH: 425  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-548-366-28

Query Match 21.2%; Score 22; DB 1; Length 425;

Best Local Similarity 31.2%; Pred. No. 2.3e+02;  
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY 25 GIRLPLRSGLGAPLG 40  
| : | | | | |  
Db 99 GVVVPYTGKMEGELG 114

## RESULT 220

US-10-652-927-28  
; Sequence 28, Application US/10652927  
; Publication No. US20040043408A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280N3  
; CURRENT APPLICATION NUMBER: US/10/652,927  
; CURRENT FILING DATE: 2003-08-29  
; PRIOR APPLICATION NUMBER: 09/794,925  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 28  
; LENGTH: 425  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-652-927-28

Query Match 21.2%; Score 22; DB 1; Length 425;  
Best Local Similarity 31.2%; Pred. No. 2.3e+02;  
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY 25 GIRLPLRSGLGAPLG 40  
| : | | | | |  
Db 99 GVVVPYTGKMEGELG 114

## RESULT 221

US-10-652-830-28  
; Sequence 28, Application US/10652830  
; Publication No. US20040048303A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280N1  
; CURRENT APPLICATION NUMBER: US/10/652,830  
; CURRENT FILING DATE: 2003-08-29  
; PRIOR APPLICATION NUMBER: 09/794,925  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0

```

; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-652-830-28

```

Query Match	21.2%	Score 22;	DB 1;	Length 425;
Best Local Similarity	31.2%	Pred. No. 2.3e+02;		
Matches	5;	Conservative	2;	Mismatches 9;
				Indels 0;
				Gaps 0;

QY 25 GIRLPLRSGLGAPLG 40  
| : : | |  
Db 99 GVVVPYTGKMEGELG 114

RESULT 222  
US-10-652-045-28  
; Sequence 28, Application US/10652045  
; Publication No. US20040166507A1

APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
TITLE OF INVENTION: Therefor  
FILE REFERENCE: 29915/6280N2

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1 PRIOR FILING DATE: 1999-09-23  
2 PRIOR APPLICATION NUMBER: PCT/US99/20881  
3 PRIOR FILING DATE: 1999-09-23  
4 PRIOR APPLICATION NUMBER: 60/101,594  
5 PRIOR FILING DATE: 1998-09-24  
6 NUMBER OF SEQ ID NOS: 74  
7 SOFTWARE: PatentIn ver. 2.0

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; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
;
US-10-652-045-28

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Query Match	21.2%	Score 22	DB 1	Length 425
Best Local Similarity	31.2%	Pred. No. 2.3e+02		
Matches	5	Conservative	2	Mismatches 9
				Indels 0
				Gaps 0

QY 25 GIRLPLRSGLGAPLG 40  
| : : | |  
Db 99 GVVVPYTGKMEGELG 114

RESULT 223  
US-10-476-935-28  
; Sequence 28, Application US/10476935  
; Publication No. US20040234976A1

APPLICANT: Beinkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/6280M1

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; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0

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; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-476-935-28

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Query Match	21.2%	Score 22;	DB 1;	Length 425;
Best Local Similarity	31.2%;	Pred. No. 2.3e+02;		
Matches	5;	Conservative	2;	Mismatches 9;
				Indels 0;
				Gaps 0;

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QY      25 GIRLPLRSGLGAPLG 40
      100 |::|
Db      99 GVVVPYTGKWEGLG 114
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RESULT 224  
US-10-940-867-28  
; Sequence 28, Application US/10940867  
; Publication No. US20050026256A1

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: GENERAL INFORMATION:
:
: APPLICANT: Gurney, Mark E.
: APPLICANT: Bienkowski, Michael J.
: APPLICANT: Heimriksson, Robert L.
: APPLICANT: Parodi, Luis A.
: APPLICANT: van, Rigdang
: APPLICANT: Pharmacia & Upjohn Company
: TITLE OF INVENTION: Alzheimer's Disease
: FILE REFERENCE: 6177.PCPA

```

1 CURRENT APPLICATION NUMBER: US/10/940,8  
2  
3 CURRENT FILING DATE: 2004-09-14  
4  
5 PRIOR APPLICATION NUMBER: US 09/806,199  
6  
7 PRIOR FILING DATE: 2001-03-26  
8  
9 PRIOR APPLICATION NUMBER: US 60/101,594  
10  
11 PRIOR FILING DATE: 1998-09-24  
12  
13 NUMBER OF SEQ ID NOS: 49

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; SOFTWARE: Patentin Ver.
; SEQ ID NO 28
; LENGTH: 425
; TYPE: PRT
; ORGANISM: Homo sapiens

```

Query Match	21.2%	Score 22;	DB 1;	Length 425;
Best Local Similarity	31.2%	Pred. No. 2.3e+02;		

25 GIRLPLRSGLGAPLG 40

RESULT 225  
US-10-477-076-28  
; Sequence 28, Application US/10477076

```

; GENERAL INFORMATION:
;
; APPLICANT: Belinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR

```

FILE REFERENCE: 28341/5280M2  
CURRENT APPLICATION NUMBER: US/10/477, 076  
CURRENT FILING DATE: 2003-11-06  
PRIOR APPLICATION NUMBER: 09/416, 901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155, 493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404, 133  
PRIOR FILING DATE: 1999-09-23

```
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 28
/ LENGTH: 425
/ TYPE: PRF
/ ORGANISM: Homo sapiens
US-10-477-076-28
```

```
Query Match          21.2%; Score 22; DB 1; Length 425;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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Qy      25 GIRLPRLSGGAPLG 40
      | : | | | | |
Db      99 GVVVPTYGKWEGLG 114
```

```
RESULT 226
US-10-872-198-139
/ Sequence 139, Application US/10872198
/ Publication No. US2005002897A1
/ GENERAL INFORMATION:
/ APPLICANT: Ulrich HAUPTS
/ APPLICANT: Andre KOLTERMANN
/ APPLICANT: Andreas SCHRIDIG
/ APPLICANT: Christian VOETSMETTER
/ APPLICANT: Ulrich Kettling
/ TITLE OF INVENTION: NEW BIOLOGICAL ENTITIES AND USE THEREOF
/ FILE REFERENCE: 04156.0002U4
/ CURRENT APPLICATION NUMBER: US/10/872,198
/ PRIOR FILING DATE: 2004-06-18
/ PRIOR APPLICATION NUMBER: 60/543,518
/ PRIOR FILING DATE: 2004-02-11
/ PRIOR APPLICATION NUMBER: 60/524,960
/ PRIOR FILING DATE: 2003-11-25
/ PRIOR APPLICATION NUMBER: EP 04003058
/ PRIOR FILING DATE: 2004-02-11
/ PRIOR APPLICATION NUMBER: EP 03025871
/ PRIOR FILING DATE: 2003-11-11
/ PRIOR APPLICATION NUMBER: EP 03025851
/ PRIOR FILING DATE: 2003-11-10
/ PRIOR APPLICATION NUMBER: EP 03013819
/ PRIOR FILING DATE: 2003-06-18
/ NUMBER OF SEQ ID NOS: 149
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 139
/ LENGTH: 440
/ TYPE: PRF
/ ORGANISM: Homo sapiens
US-10-872-198-139
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Query Match          21.2%; Score 22; DB 1; Length 440;
Best Local Similarity 31.2%; Pred. No. 2.3e+02;
Matches 5; Conservative 2; Mismatches 9; Indels 0; Gaps 0;
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```
Qy      25 GIRLPRLSGGAPLG 40
      | : | | | | |
Db      66 GVVVPTYGKWEGLG 81
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RESULT 227
US-09-969-671A-4
/ Sequence 4, Application US/09969671A
/ Publication No. US20030036112A1
/ GENERAL INFORMATION:
/ APPLICANT: CHAPMAN, CONRAD G.
/ APPLICANT: MURPHY, KAY
/ APPLICANT: POWELL, DAVID J.
/ APPLICANT: SMITH, TRUDI S.
```

```
/ TITLE OF INVENTION: ASP2
/ FILE REFERENCE: GH-70368-D1
/ CURRENT APPLICATION NUMBER: US/09/969,671A
/ CURRENT FILING DATE: 2001-10-03
/ PRIOR APPLICATION NUMBER: UK 9701684.4
/ PRIOR FILING DATE: 1997-01-28
/ PRIOR APPLICATION NUMBER: 09/009,191
/ PRIOR FILING DATE: 1998-01-20
/ PRIOR APPLICATION NUMBER: 09/694,200
/ PRIOR FILING DATE: 2000-10-23
/ NUMBER OF SEQ ID NOS: 6
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 4
/ LENGTH: 774
/ TYPE: PRF
/ ORGANISM: Homo sapiens
/ FEATURE:
/ NAME/KEY: unknown
/ LOCATION: (747) (749) (755) (761) (763) (764) (765) (766) (767) (768) (769) (774)
/ OTHER INFORMATION: wherein Xaa can be represented by any one of the twenty naturally
/ OTHER INFORMATION: occurring amino acids
US-09-969-671A-4
```

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Query Match          21.2%; Score 22; DB 1; Length 774;
Best Local Similarity 80.0%; Pred. No. 2.3e+02;
Matches 4; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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Qy      22 TTHGI 26
      | | | |
Db      713 TTHGI 717
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```
RESULT 228
US-10-308-365-4
/ Sequence 4, Application US/10308365
/ Publication No. US20030109022A1
/ GENERAL INFORMATION:
/ APPLICANT: CHAPMAN, CONRAD G.
/ APPLICANT: MURPHY, KAY
/ APPLICANT: POWELL, DAVID J.
/ APPLICANT: SMITH, TRUDI S.
/ TITLE OF INVENTION: ASP 2
/ FILE REFERENCE: GH-70368-2
/ CURRENT APPLICATION NUMBER: US/10/308,365
/ CURRENT FILING DATE: 2002-12-03
/ PRIOR APPLICATION NUMBER: US/09/694,200
/ PRIOR FILING DATE: 2000-10-23
/ PRIOR APPLICATION NUMBER: UK 9701684.4
/ PRIOR FILING DATE: 1997-01-28
/ PRIOR APPLICATION NUMBER: 09/009,191
/ PRIOR FILING DATE: 1998-01-20
/ NUMBER OF SEQ ID NOS: 6
/ SOFTWARE: FastSeq for Windows Version 3.0
/ SEQ ID NO 4
/ LENGTH: 774
/ TYPE: PRF
/ ORGANISM: HOMO SAPIENS
/ FEATURE: MISCELLANEOUS FEATURE
/ NAME/KEY: UNSURE
/ LOCATION: (747) (749) (755) (761) (763) (764) (765) (766) (767) (768) (769) (774)
/ OTHER INFORMATION: OTHER INFORMATION: Xaa = amino acid
US-10-308-365-4
```

```
Query Match          21.2%; Score 22; DB 1; Length 774;
Best Local Similarity 80.0%; Pred. No. 2.3e+02;
Matches 4; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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```
Qy      22 TTHGI 26
      | | | |
Db      713 TTHGI 717
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RESULT 229

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US-10-829-717-4
; Sequence 4, Application US/10829717
; Publication No. US20050101556A1
; GENERAL INFORMATION:
; APPLICANT: CHAPMAN, CONRAD G.
; APPLICANT: MURPHY, KAY
; APPLICANT: POWELL, DAVID J.
; APPLICANT: SMITH, TRUDI S.
; TITLE OF INVENTION: ASP 2
; FILE REFERENCE: GH-70368-2
; CURRENT APPLICATION NUMBER: US/10/829,717
; CURRENT FILING DATE: 2004-04-22
; PRIOR APPLICATION NUMBER: US/10/308,365
; PRIOR FILING DATE: 2002-12-03
; PRIOR APPLICATION NUMBER: US/09/694,200
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: UK 9701684.4
; PRIOR FILING DATE: 1997-01-28
; PRIOR APPLICATION NUMBER: 09/009,191
; PRIOR FILING DATE: 1998-01-20
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 4
; LENGTH: 774
; TYPE: PRT
; ORGANISM: HOMO SAPIENS
; FEATURE: FEATURE: MISCELLANEOUS FEATURE
; NAME/KEY: UNSURE
; LOCATION: (747) (749) (755) (761) (763) (764) (765) (766) (767) (768) (769) (774)
; OTHER INFORMATION: OTHER INFORMATION: Xaa = amino acid
US-10-829-717-4

```

```

Query Match      21.2%; Score 22; DB 1; Length 774;
Best Local Similarity 80.0%; Pred. No. 2.3e+02;
Matches 4; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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QY      22 TTHGI 26
DB      713 TTHGI 717

```

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RESULT 230
US-10-726-967A-52
; Sequence 52, Application US/10726967A
; Publication No. US20050074456A1
; GENERAL INFORMATION:
; APPLICANT: Baillinger, Marcus
; TITLE OF INVENTION: Constructs for Homogenously Processed Preparations of Beta Site
; FILE REFERENCE: 2004345-0021
; CURRENT APPLICATION NUMBER: US/10/726,967A
; CURRENT FILING DATE: 2003-12-02
; NUMBER OF SEQ ID NOS: 110
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 52
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: Residues 74-101 of human BACE1 preprosequence
US-10-726-967A-52

```

```

Query Match      13.5%; Score 14; DB 1; Length 28;
Best Local Similarity 66.7%; Pred. No. 5.7;
Matches 2; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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QY      36 GAP 38
DB      9 GSP 11

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Search completed: August 3, 2005, 11:50:14
Job time : 2 secs

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OM of: us-10-726-967a-1 to: rgep2ndb:\* out\_format : pfs  
Date: Wed Aug 3 11:53:38 2005

About: Results were produced by the GenCore software, version 5.1.6,  
Copyright (c) 1993-2005 Compugen Ltd.

Command line parameters:

-MODEL=framed.p2n.model -DEV=soft -Q=us-10-726-967a-1 -DB=rgep2ndb -SUPPL=pfs  
-OUT=10726967-1\_22-41vSID52hitst.p2n.rge -MINMATCH=0.1 -LOOPEL=0 -LOOPEXT=0  
-UNITS=bits -START=22 -END=41 -MATRIX=blomsum40.cdi -LIST=500  
-OUTALIGN=00 -THR SCORE=pc -THR MAX=100 -THR MIN=0 -ALIGN=500 -MODE=LOCAL  
-DUAL=pfs -NORM=ext -HEAPSIZE=50 -MINLEN=0 -MAXLEN=200000000 -NCPU=6  
-NO.XLPHY -NEG SCORES=0 -LONGLOG -THREADS=1 -XGAP=10 -XGAPEXT=0.5 -FGAP=6  
-FGAPEXT=7 -YGAP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7

Search information:

Query: us-10-726-967a-1  
Query length: 20  
Database: rgep2ndb:\*  
Database sequences: 169  
Database length: 337641  
Search time (sec): 10

Score list:

Sequence	Strd	Orig	ZScore	EScore	len	Documentation	
rgep2ndb:AB089958	+	104.00	62.36	36.72	517	ACCESSION:AB089958	Hom sapien
rgep2ndb:AR224122	+	104.00	62.19	37.49	1287	ACCESSION:AR224122	Unknown.
rgep2ndb:AR629253	+	104.00	62.19	37.49	1287	ACCESSION:AR629253	Unknown.
rgep2ndb:AR478808	+	104.00	62.19	37.49	1287	ACCESSION:AR478808	Unknown.
rgep2ndb:AR67374	+	104.00	62.19	37.49	1287	ACCESSION:AR67374	Unknown.
rgep2ndb:AR53014	+	104.00	62.19	37.49	1287	ACCESSION:AR53014	Unknown.
rgep2ndb:AR540915	+	104.00	62.19	37.49	1287	ACCESSION:AR540915	Unknown.
rgep2ndb:AR560125	+	104.00	62.19	37.49	1287	ACCESSION:AR560125	Unknown.
rgep2ndb:AX1054132	+	104.00	62.19	37.49	1287	ACCESSION:AX1054132	synthetic c
rgep2ndb:AX573870	+	104.00	62.19	37.49	1287	ACCESSION:AX573870	synthetic c
rgep2ndb:BD235897	+	104.00	62.19	37.50	1302	ACCESSION:BD235897	Hom sapien
rgep2ndb:AR224103	+	104.00	62.19	37.50	1302	ACCESSION:AR224103	Unknown.
rgep2ndb:AR262924	+	104.00	62.19	37.50	1302	ACCESSION:AR262924	Unknown.
rgep2ndb:AR478789	+	104.00	62.19	37.50	1302	ACCESSION:AR478789	Unknown.
rgep2ndb:AR487355	+	104.00	62.19	37.50	1302	ACCESSION:AR487355	Unknown.
rgep2ndb:AR531995	+	104.00	62.19	37.50	1302	ACCESSION:AR531995	Unknown.
rgep2ndb:AR540896	+	104.00	62.19	37.50	1302	ACCESSION:AR540896	Unknown.
rgep2ndb:AR560106	+	104.00	62.19	37.50	1302	ACCESSION:AR560106	Unknown.
rgep2ndb:AX105407	+	104.00	62.19	37.50	1302	ACCESSION:AX105407	Hom sapien
rgep2ndb:AX573845	+	104.00	62.19	37.50	1302	ACCESSION:AX573845	Hom sapien
rgep2ndb:AR700454	+	104.00	62.19	37.50	1302	ACCESSION:AR700454	Hom sapien
rgep2ndb:AR224123	+	104.00	62.19	37.51	1305	ACCESSION:AR224123	Unknown.
rgep2ndb:AR262924	+	104.00	62.19	37.51	1305	ACCESSION:AR262924	Unknown.
rgep2ndb:AR478809	+	104.00	62.19	37.51	1305	ACCESSION:AR478809	Unknown.
rgep2ndb:AR487375	+	104.00	62.19	37.51	1305	ACCESSION:AR487375	Unknown.
rgep2ndb:AR532015	+	104.00	62.19	37.51	1305	ACCESSION:AR532015	Unknown.
rgep2ndb:AR540916	+	104.00	62.19	37.51	1305	ACCESSION:AR540916	Unknown.
rgep2ndb:AR560126	+	104.00	62.19	37.51	1305	ACCESSION:AR560126	Unknown.
rgep2ndb:AX105434	+	104.00	62.19	37.51	1305	ACCESSION:AX105434	synthetic c
rgep2ndb:AX573872	+	104.00	62.19	37.51	1305	ACCESSION:AX573872	synthetic c
rgep2ndb:AR505038	+	104.00	62.18	37.51	1303	ACCESSION:AR505038	Hom sapien
rgep2ndb:BD235895	+	104.00	62.18	37.53	1341	ACCESSION:BD235895	Hom sapien
rgep2ndb:AR224101	+	104.00	62.18	37.53	1341	ACCESSION:AR224101	Unknown.
rgep2ndb:AR262932	+	104.00	62.18	37.53	1341	ACCESSION:AR262932	Unknown.
rgep2ndb:AR47887	+	104.00	62.18	37.53	1341	ACCESSION:AR47887	Unknown.
rgep2ndb:AR487353	+	104.00	62.18	37.53	1341	ACCESSION:AR487353	Unknown.
rgep2ndb:AR531993	+	104.00	62.18	37.53	1341	ACCESSION:AR531993	Unknown.
rgep2ndb:AR540894	+	104.00	62.18	37.53	1341	ACCESSION:AR540894	Unknown.
rgep2ndb:AR105403	+	104.00	62.18	37.53	1341	ACCESSION:AR105403	Unknown.
rgep2ndb:AR105403	+	104.00	62.18	37.53	1341	ACCESSION:AR105403	Hom sapien
rgep2ndb:BD235899	+	104.00	62.18	37.53	1362	ACCESSION:BD235899	Hom sapien
rgep2ndb:AR224105	+	104.00	62.18	37.54	1362	ACCESSION:AR224105	Unknown.
rgep2ndb:AR262936	+	104.00	62.18	37.54	1362	ACCESSION:AR262936	Unknown.
rgep2ndb:AR478791	+	104.00	62.18	37.54	1362	ACCESSION:AR478791	Unknown.
rgep2ndb:AR487357	+	104.00	62.18	37.54	1362	ACCESSION:AR487357	Unknown.
rgep2ndb:AR531997	+	104.00	62.18	37.54	1362	ACCESSION:AR531997	Unknown.

rgep2ndb:AR540898	+	104.00	62.18	37.54	1362	ACCESSION:AR540898	Unknown.
rgep2ndb:AR560108	+	104.00	62.18	37.54	1362	ACCESSION:AR560108	Unknown.
rgep2ndb:AX105411	+	104.00	62.18	37.54	1362	ACCESSION:AX105411	Hom sapien
rgep2ndb:AX573849	+	104.00	62.18	37.54	1362	ACCESSION:AX573849	Hom sapien
rgep2ndb:CQ772944	+	104.00	62.18	37.54	1365	ACCESSION:CQ772944	synthetic c
rgep2ndb:CQ772936	+	104.00	62.18	37.55	1365	ACCESSION:CQ772936	Hom sapien
rgep2ndb:CQ772940	+	104.00	62.18	37.55	1368	ACCESSION:CQ772940	synthetic c
rgep2ndb:CQ772942	+	104.00	62.18	37.55	1368	ACCESSION:CQ772942	synthetic c
rgep2ndb:AR224106	+	104.00	62.18	37.55	1380	ACCESSION:AR224106	Unknown.
rgep2ndb:AR262923	+	104.00	62.18	37.55	1380	ACCESSION:AR262923	Unknown.
rgep2ndb:AR262937	+	104.00	62.18	37.55	1380	ACCESSION:AR262937	Unknown.
rgep2ndb:AR478788	+	104.00	62.18	37.55	1380	ACCESSION:AR478788	Unknown.
rgep2ndb:AR478792	+	104.00	62.18	37.55	1380	ACCESSION:AR478792	Unknown.
rgep2ndb:AR487354	+	104.00	62.18	37.55	1380	ACCESSION:AR487354	Unknown.
rgep2ndb:AR531994	+	104.00	62.18	37.55	1380	ACCESSION:AR531994	Unknown.
rgep2ndb:AR531998	+	104.00	62.18	37.55	1380	ACCESSION:AR531998	Unknown.
rgep2ndb:AR540895	+	104.00	62.18	37.55	1380	ACCESSION:AR540895	Unknown.
rgep2ndb:AR540899	+	104.00	62.18	37.55	1380	ACCESSION:AR540899	Unknown.
rgep2ndb:AR560105	+	104.00	62.18	37.55	1380	ACCESSION:AR560105	Unknown.
rgep2ndb:AR105405	+	104.00	62.18	37.55	1380	ACCESSION:AR105405	Unknown.
rgep2ndb:AX105413	+	104.00	62.18	37.55	1380	ACCESSION:AX105413	Hom sapien
rgep2ndb:AX573843	+	104.00	62.18	37.55	1380	ACCESSION:AX573843	Hom sapien
rgep2ndb:AR573851	+	104.00	62.18	37.55	1380	ACCESSION:AR573851	Hom sapien
rgep2ndb:CQ772952	+	104.00	62.18	37.56	1383	ACCESSION:CQ772952	synthetic c
rgep2ndb:CQ772938	+	104.00	62.18	37.56	1386	ACCESSION:CQ772938	synthetic c
rgep2ndb:CQ772946	+	104.00	62.18	37.56	1386	ACCESSION:CQ772946	synthetic c
rgep2ndb:AR560437	+	104.00	62.17	37.57	1408	ACCESSION:AR560437	Hom sapien
rgep2ndb:AR533816	+	104.00	62.17	37.59	1431	ACCESSION:AR533816	Hom sapien
rgep2ndb:AR5050436	+	104.00	62.17	37.61	1465	ACCESSION:AR5050436	Hom sapien
rgep2ndb:AR700449	+	104.00	62.16	37.61	1470	ACCESSION:AR700449	Hom sapien
rgep2ndb:AR404163	+	104.00	62.16	37.63	1503	ACCESSION:AR404163	Unknown.
rgep2ndb:AR700448	+	104.00	62.16	37.63	1506	ACCESSION:AR700448	Hom sapien
rgep2ndb:AR823518	+	104.00	62.16	37.63	1506	ACCESSION:AR823518	Hom sapien
rgep2ndb:AR204943	+	104.00	62.16	37.63	1506	ACCESSION:AR204943	Hom sapien
rgep2ndb:BD103723	+	104.00	62.16	37.64	1527	ACCESSION:BD103723	Hom sapien
rgep2ndb:BD235887	+	104.00	62.11	37.87	1977	ACCESSION:BD235887	Hom sapien
rgep2ndb:AR224094	+	104.00	62.11	37.87	1977	ACCESSION:AR224094	Unknown.
rgep2ndb:AR262925	+	104.00	62.11	37.87	1977	ACCESSION:AR262925	Unknown.
rgep2ndb:AR478779	+	104.00	62.11	37.87	1977	ACCESSION:AR478779	Unknown.
rgep2ndb:AR487346	+	104.00	62.11	37.87	1977	ACCESSION:AR487346	Unknown.
rgep2ndb:AR531985	+	104.00	62.11	37.87	1977	ACCESSION:AR531985	Unknown.
rgep2ndb:AR540887	+	104.00	62.11	37.87	1977	ACCESSION:AR540887	Unknown.
rgep2ndb:AR560096	+	104.00	62.11	37.87	1977	ACCESSION:AR560096	Unknown.
rgep2ndb:AX105387	+	104.00	62.11	37.87	1977	ACCESSION:AX105387	Hom sapien
rgep2ndb:AX378017	+	104.00	62.11	37.87	1977	ACCESSION:AX378017	Hom sapien
rgep2ndb:AR573825	+	104.00	62.11	37.87	1977	ACCESSION:AR573825	Hom sapien
rgep2ndb:BD235886	+	104.00	62.10	37.91	2070	ACCESSION:BD235886	Hom sapien
rgep2ndb:AR224093	+	104.00	62.10	37.91	2070	ACCESSION:AR224093	Unknown.
rgep2ndb:AR262924	+	104.00	62.10	37.91	2070	ACCESSION:AR262924	Unknown.
rgep2ndb:AR478778	+	104.00	62.10	37.91	2070	ACCESSION:AR478778	Unknown.
rgep2ndb:AR487345	+	104.00	62.10	37.91	2070	ACCESSION:AR487345	Unknown.
rgep2ndb:AR531984	+	104.00	62.10	37.91	2070	ACCESSION:AR531984	Unknown.
rgep2ndb:AR540886	+	104.00	62.10	37.91	2070	ACCESSION:AR540886	Unknown.
rgep2ndb:AR560095	+	104.00	62.10	37.91	2070	ACCESSION:AR560095	Unknown.
rgep2ndb:AX105385	+	104.00	62.10	37.91	2070	ACCESSION:AX105385	Hom sapien
rgep2ndb:AX378015	+	104.00	62.10	37.91	2070	ACCESSION:AX378015	Hom sapien
rgep2ndb:AR573823	+	104.00	62.10	37.91	2070	ACCESSION:AR573823	Hom sapien
rgep2ndb:AR700447	+	104.00	62.10	37.91	2070	ACCESSION:AR700447	Hom sapien
rgep2ndb:AR200343	+	104.00	62.09	37.91	2070	ACCESSION:AR200343	Hom sapien
rgep2ndb:BC036084	+	104.00	62.09	37.95	2174	ACCESSION:BC036084	Hom sapien
), complete cds.							
rgep2ndb:AR404203	+	104.00	62.08	38.02	2348	ACCESSION:AR404203	Unknown.
rgep2ndb:AR404204	+	104.00	62.08	38.02	2348	ACCESSION:AR404204	Unknown.
rgep2ndb:AR700446	+	104.00	62.06	38.08	2526	ACCESSION:AR700446	Hom sapien
rgep2ndb:AR190725	+	104.00	62.06	38.08	2526	ACCESSION:AR190725	Hom sapien



rgp2ndb:AR478779	-	32.00	40.94	281.85	1977	ACCESSION:AR478779	Unknown. S
rgp2ndb:AR487346	-	32.00	40.94	281.85	1977	ACCESSION:AR487346	Unknown. S
rgp2ndb:AR531985	-	32.00	40.94	281.85	1977	ACCESSION:AR531985	Unknown. S
rgp2ndb:AR540887	-	32.00	40.94	281.85	1977	ACCESSION:AR540887	Unknown. S
rgp2ndb:AR560096	-	32.00	40.94	281.85	1977	ACCESSION:AR560096	Unknown. S
rgp2ndb:AR105387	-	32.00	40.94	281.85	1977	ACCESSION:AR105387	Unknown. S
rgp2ndb:AR378017	-	32.00	40.94	281.85	1977	ACCESSION:AR378017	Unknown. S
rgp2ndb:AR573825	-	32.00	40.94	281.85	1977	ACCESSION:AR573825	Unknown. S
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rgp2ndb:AR224093	-	32.00	40.93	281.96	2070	ACCESSION:AR224093	Unknown. S
rgp2ndb:AR269224	-	32.00	40.93	281.96	2070	ACCESSION:AR269224	Unknown. S
rgp2ndb:AR478778	-	32.00	40.93	281.96	2070	ACCESSION:AR478778	Unknown. S
rgp2ndb:AR487345	-	32.00	40.93	281.96	2070	ACCESSION:AR487345	Unknown. S
rgp2ndb:AR531984	-	32.00	40.93	281.96	2070	ACCESSION:AR531984	Unknown. S
rgp2ndb:AR540886	-	32.00	40.93	281.96	2070	ACCESSION:AR540886	Unknown. S
rgp2ndb:AR560095	-	32.00	40.93	281.96	2070	ACCESSION:AR560095	Unknown. S
rgp2ndb:AR105385	-	32.00	40.93	281.96	2070	ACCESSION:AR105385	Unknown. S
rgp2ndb:AR378015	-	32.00	40.93	281.96	2070	ACCESSION:AR378015	Unknown. S
rgp2ndb:AR573823	-	32.00	40.93	281.96	2070	ACCESSION:AR573823	Unknown. S
rgp2ndb:AR700447	-	32.00	40.93	281.96	2070	ACCESSION:AR700447	Unknown. S
rgp2ndb:AR200343	-	32.00	40.93	281.96	2070	ACCESSION:AR200343	Unknown. S
rgp2ndb:AR178469	-	32.00	40.89	282.46	2541	ACCESSION:AR178469	Unknown. S
rgp2ndb:AR50816	-	32.00	40.89	282.46	2541	ACCESSION:AR50816	Unknown. S
rgp2ndb:AX002655	-	32.00	40.89	282.46	2541	ACCESSION:AX002655	Unknown. S
rgp2ndb:AX700452	-	32.00	40.89	282.46	2541	ACCESSION:AX700452	Unknown. S
rgp2ndb:AR305033	-	32.00	40.84	283.07	3252	ACCESSION:AR305033	Unknown. S
rgp2ndb:AR062111	-	32.00	40.84	283.07	3252	ACCESSION:AR062111	Unknown. S
rgp2ndb:AX062101	-	32.00	40.84	283.07	3252	ACCESSION:AX062101	Unknown. S
rgp2ndb:AX473368	-	32.00	40.84	283.07	3252	ACCESSION:AX473368	Unknown. S
rgp2ndb:AX700453	-	32.00	40.84	283.07	3252	ACCESSION:AX700453	Unknown. S
rgp2ndb:AR200193	-	32.00	40.84	283.07	3252	ACCESSION:AR200193	Unknown. S
rgp2ndb:BD235898	-	28.00	39.84	295.14	1278	ACCESSION:BD235898	Unknown. S
rgp2ndb:AR224104	-	28.00	39.84	295.14	1278	ACCESSION:AR224104	Unknown. S
rgp2ndb:AR269235	-	28.00	39.84	295.14	1278	ACCESSION:AR269235	Unknown. S
rgp2ndb:AR478790	-	28.00	39.84	295.14	1278	ACCESSION:AR478790	Unknown. S
rgp2ndb:AR487356	-	28.00	39.84	295.14	1278	ACCESSION:AR487356	Unknown. S
rgp2ndb:AR531996	-	28.00	39.84	295.14	1278	ACCESSION:AR531996	Unknown. S
rgp2ndb:AR540897	-	28.00	39.84	295.14	1278	ACCESSION:AR540897	Unknown. S
rgp2ndb:AR560107	-	28.00	39.84	295.14	1278	ACCESSION:AR560107	Unknown. S
rgp2ndb:AR105409	-	28.00	39.84	295.14	1278	ACCESSION:AR105409	Unknown. S
rgp2ndb:AR573847	-	28.00	39.84	295.14	1278	ACCESSION:AR573847	Unknown. S
rgp2ndb:CO772942	-	28.00	39.83	295.29	1368	ACCESSION:CO772942	Unknown. S
rgp2ndb:CO772950	-	28.00	39.83	295.32	1386	ACCESSION:CO772950	Unknown. S
rgp2ndb:AR178470	-	28.00	39.73	296.46	2370	ACCESSION:AR178470	Unknown. S
rgp2ndb:ES0817	-	28.00	39.73	296.46	2370	ACCESSION:ES0817	Unknown. S
rgp2ndb:AX002657	-	28.00	39.73	296.46	2370	ACCESSION:AX002657	Unknown. S
rgp2ndb:AR202196	-	27.00	39.52	298.75	1506	ACCESSION:AR202196	Unknown. S
rgp2ndb:BD235888	-	27.00	39.46	299.38	2043	ACCESSION:BD235888	Unknown. S
rgp2ndb:AR224095	-	27.00	39.46	299.38	2043	ACCESSION:AR224095	Unknown. S
rgp2ndb:AR269226	-	27.00	39.46	299.38	2043	ACCESSION:AR269226	Unknown. S
rgp2ndb:AR478780	-	27.00	39.46	299.38	2043	ACCESSION:AR478780	Unknown. S
rgp2ndb:AR487347	-	27.00	39.46	299.38	2043	ACCESSION:AR487347	Unknown. S
rgp2ndb:AR531986	-	27.00	39.46	299.38	2043	ACCESSION:AR531986	Unknown. S
rgp2ndb:AR540888	-	27.00	39.46	299.38	2043	ACCESSION:AR540888	Unknown. S
rgp2ndb:AR560097	-	27.00	39.46	299.38	2043	ACCESSION:AR560097	Unknown. S
rgp2ndb:AR105389	-	27.00	39.46	299.38	2043	ACCESSION:AR105389	Unknown. S
rgp2ndb:AR573827	-	27.00	39.46	299.38	2043	ACCESSION:AR573827	Unknown. S
rgp2ndb:AR200346	-	26.00	39.26	301.55	1278	ACCESSION:AR200346	Unknown. S
rgp2ndb:BD235898	-	26.00	39.26	301.55	1278	ACCESSION:BD235898	Unknown. S
rgp2ndb:AR224104	-	26.00	39.26	301.55	1278	ACCESSION:AR224104	Unknown. S
rgp2ndb:AR269235	-	26.00	39.26	301.55	1278	ACCESSION:AR269235	Unknown. S
rgp2ndb:AR478790	-	26.00	39.26	301.55	1278	ACCESSION:AR478790	Unknown. S
rgp2ndb:AR487356	-	26.00	39.26	301.55	1278	ACCESSION:AR487356	Unknown. S
rgp2ndb:AR531996	-	26.00	39.26	301.55	1278	ACCESSION:AR531996	Unknown. S
rgp2ndb:AR540897	-	26.00	39.26	301.55	1278	ACCESSION:AR540897	Unknown. S
rgp2ndb:AR560107	-	26.00	39.26	301.55	1278	ACCESSION:AR560107	Unknown. S
rgp2ndb:AR105409	-	26.00	39.26	301.55	1278	ACCESSION:AR105409	Unknown. S
rgp2ndb:AR573847	-	26.00	39.26	301.55	1278	ACCESSION:AR573847	Unknown. S
rgp2ndb:CO772940	-	26.00	39.24	301.68	1368	ACCESSION:CO772940	Unknown. S
rgp2ndb:CO772948	-	26.00	39.24	301.68	1368	ACCESSION:CO772948	Unknown. S
rgp2ndb:CO772952	-	26.00	39.24	301.70	1383	ACCESSION:CO772952	Unknown. S
rgp2ndb:CO772946	-	26.00	39.24	301.71	1386	ACCESSION:CO772946	Unknown. S

rgp2ndb:AR178470 - 26.00 39.14 302.76 2370 | ACCESSION:AR178470 Unknown. S  
 rgp2ndb:ES0817 - 26.00 39.14 302.76 2370 | ACCESSION:ES0817 unidentified  
 rgp2ndb:AX002657 - 26.00 39.14 302.76 2370 | ACCESSION:AX002657 unidentified

Sequence name: rgp2ndb:AB089958  
 LOCUS AB089958 517 bp mRNA linear PRI 19-AUG-2003  
 DEFINITION Homo sapiens BACE mRNA for beta-site APP cleaving enzyme isoform I-127, complete cds.  
 ACCESSION AB089958  
 VERSION AB089958.1 GI.34014375  
 KEYWORDS  
 SOURCE Homo sapiens (human)  
 ORGANISM Homo sapiens  
 Eukaryote; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE  
 1 Tanahashi, H.  
 A novel alternatively spliced isoform of BACE, I-127 induced by cycloneximide treatment  
 JOURNAL Unpublished  
 REFERENCE 2 (bases 1 to 517)  
 AUTHORS Tanahashi, H.  
 TITLE Direct Submission  
 JOURNAL Submitted (17-AUG-2002) Hiroshi Tanahashi, National Institute of Neuroscience, Division of Dementiating Disease and Aging; 4-1-1 Ogawabashi, Kodaira, Tokyo 187-8502, Japan  
 (E-mail: tanahash@ncnp.go.jp, Tel: 81-042-341-2711 (ex. 5163), Fax: 81-042-346-1747)

FEATURES  
 source  
 1..517  
 location/Qualifiers  
 /organism="Homo sapiens"  
 /mol\_type="mRNA"  
 /db\_xref="taxon:9606"  
 /chromosome="11"  
 /map="11q23.2-23.3"  
 /cell\_line="human neuroblastoma SH-SY5Y"  
 /note="I-127 is induced by cycloneximide treatment. Alternative splicing of the RNA occurs at an internal donor in exon 3."  
 1..517  
 /gene="BACE"  
 1..384  
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 /db\_xref="GI:34014376"  
 /translation="MAQALPMLMMGAGVLPAGHGTGRTLRSGAGAPIGLRPRTDSEPEERGRGSFVEMVDNLGRKSGGQIVEMTVGSPPTLNLVDIGSSNFAVGAAHPPLHRYRQRLSYRDLAKA"

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 /product="beta-site APP cleaving enzyme isoform I-127"  
 /protein\_id="BAC81826.1"  
 /db\_xref="GI:34014376"  
 /translation="MAQALPMLMMGAGVLPAGHGTGRTLRSGAGAPIGLRPRTDSEPEERGRGSFVEMVDNLGRKSGGQIVEMTVGSPPTLNLVDIGSSNFAVGAAHPPLHRYRQRLSYRDLAKA"

CDS  
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 /codon\_start=1  
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 /db\_xref="GI:34014376"  
 /translation="MAQALPMLMMGAGVLPAGHGTGRTLRSGAGAPIGLRPRTDSEPEERGRGSFVEMVDNLGRKSGGQIVEMTVGSPPTLNLVDIGSSNFAVGAAHPPLHRYRQRLSYRDLAKA"

Alignment of: us-10-726-967a-1 x AB089958 ..  
 Alignment segment 1/1: (+)  
 Matching Length: 104.00  
 Matching Percent: 100.00  
 Total Percent Similarity: 100.00  
 Gaps: 0

Alignment:  
 22 ThrGlnHtAGLYtLeArgLeuProLeuArgSerGlyLeuGlyAlaApr 38  
 64 ACCGAGCAGCGGATCCGCTCCCTGCGCAGCGGCTGGGGGGGGCCCC 113  
 38 oleuGlyLeu  
 114 CCGGGGGCGG 123



Alignment of: us-10-726-967a-1 x AR487374 ..  
Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
64 ACCGACGACGGGATCCGGCTGCCCTGGCGACGGGCTGGGGGGGCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rgep2ndb:AR532014

Sequence documentation:

LOCUS AR532014 1287 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 50 from patent US 6727074.  
ACCESSION AR532014  
VERSION AR532014.1 GI:53920548  
KEYWORDS  
SOURCE  
ORGANISM Unknown.  
Unclassified.

REFERENCE 1 (bases 1 to 1287)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and  
Van,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6727074-A 50 27-APR-2004;  
FEATURES location/Qualifiers  
source 1..1287  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR532014 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
64 ACCGACGACGGGATCCGGCTGCCCTGGCGACGGGCTGGGGGGGCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rgep2ndb:AR540915

Sequence documentation:

LOCUS AR540915 1287 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 50 from patent US 6737510.  
ACCESSION AR540915  
VERSION AR540915.1 GI:53932428  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
Unclassified.

REFERENCE 1 (bases 1 to 1287)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and  
Van,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
thereof  
JOURNAL Patent: US 6737510-A 50 18-MAY-2004;  
FEATURES location/Qualifiers  
source 1..1287  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540915 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

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22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
64 ACCGACGACGGGATCCGGCTGCCCTGGCGACGGGCTGGGGGGGCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rgep2ndb:AR560125

Sequence documentation:

LOCUS AR560125 1287 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 50 from patent US 6753163.  
ACCESSION AR560125  
VERSION AR560125.1 GI:53970492  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
Unclassified.

REFERENCE 1 (bases 1 to 1287)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and  
Van,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6753163-A 50 22-JUN-2004;  
FEATURES location/Qualifiers  
source 1..1287  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560125 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
64 ACCGACGACGGGATCCGGCTGCCCTGGCGACGGGCTGGGGGGGCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rgep2ndb:AX105432

Sequence documentation:

LOCUS AX105432 1287 bp DNA linear PAT 30-APR-2001  
DEFINITION Sequence 50 from Patent WO0123533.  
ACCESSION AX105432  
VERSION AX105432.1 GI:13921541  
KEYWORDS

SOURCE

ORGANISM synthetic construct  
other sequences; artificial sequences.

REFERENCE 1  
AUTHORS Gurney, M. and Bienkowski, M.J.

TITLE Alzheimer's disease secretase, app substrates therefor, and uses

JOURNAL Patent: WO 0123533-A 50 05-APR-2001;

Pharmacia & Upjohn Company (US)

FEATURES

source  
1..1287  
/organism="synthetic construct"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:32630"  
/note="Hu-Asp2(b) delta TM"

Alignment of: us-10-726-967a-1 x AX105432 ..

Alignment segment 1/1: (+)

Quality:	104.00	Base:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
64 ACCGACGACGCGCATCCGCGCTGCCCTGCGCAGCGGCGCTGGGGGCGCCCC 113
|||||
38 oleuGlyLeu
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rgep2ndb:AX573870

Sequence documentation:

LOCUS AX573870 1287 bp DNA linear PAT 07-JAN-2003  
DEFINITION Sequence 50 from Patent EP1249498.  
ACCESSION AX573870  
VERSION AX573870.1 GI:27551507  
KEYWORDS

SOURCE

ORGANISM synthetic construct  
synthetic construct  
other sequences; artificial sequences.

REFERENCE 1  
AUTHORS Gurney, M. and Bienkowski, M.J.

TITLE Alzheimer's disease secretase, app substrates therefor, and uses

JOURNAL Patent: EP 1249498-A 50 16-OCT-2002;

Pharmacia & Upjohn Company (US)

FEATURES

source  
1..1287  
/organism="synthetic construct"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:32630"  
/note="Hu-Asp2(b) delta TM"

Alignment of: us-10-726-967a-1 x AX573870 ..

Alignment segment 1/1: (+)

Quality:	104.00	Base:	37.5
----------	--------	-------	------

Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

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22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
64 ACCGACGACGCGCATCCGCGCTGCCCTGCGCAGCGGCGCTGGGGGCGCCCC 113
|||||
38 oleuGlyLeu
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rgep2ndb:BD235897

Sequence documentation:

LOCUS BD235897 1302 bp DNA linear PAT 17-JUL-2003  
DEFINITION Alzheimer's disease secretase.

ACCESSION BD235897  
VERSION BD235897.1 GI:33045667

KEYWORDS JP 2002526081-A/13.

SOURCE Homo sapiens (human)

ORGANISM

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Homidae; Homo.

REFERENCE 1 (bases 1 to 1302)  
AUTHORS Gurney, M.E., Bienkowski, M.J., Heinrichson, R.L., Parodi, L.A. and

Van, R.

TITLE Alzheimer's disease secretase

JOURNAL Patent: JP 2002526081-A 13 20-AUG-2002;

Pharmacia AND Upjohn CO

COMMENT OS Homo sapiens (human)

PN JP 2002526081-A/13

PD 20-AUG-2002

PE 23-SEP-1999 JP 2000574268

PR 24-SEP-1998 US 60/101594

PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI

HEINRICHSON, PI

LOUIS A PARODI, RIQIANG YAN

PC C12N1/09, A61K45/00, A61P25/28, C07K14/47, C07K16/18, C12N1/15, PC

C12N1/19, PC

C12N1/21, C12N5/10, C12N9/64, C12P21/02, C12P21/08, C12Q1/37, G01N33/ PC

15, PC

G01N33/50//C12N1/21, C12R1/19, C12N15/00, C12N5/00 CC

Alzheimer's disease secretase

FT source 1..1302

Location/Qualifiers

1..1302

/organism="Homo sapiens"

/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x BD235897 ..

Alignment segment 1/1: (+)

Quality:	104.00	Base:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

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22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||||
4 ACTCAGCATGGTATTCGTCTGCGACTGCGAGCGGCTGGGGTGTGCTCC 53
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38 OleuGLYLeu  
|||||  
54 ACTGGGCTCG 63

Sequence name: rgep2ndb:AR224103

Sequence documentation:  
LOCUS AR224103 1302 bp DNA linear PAT 26-SEP-2002  
DEFINITION Sequence 25 from patent US 6440698.  
ACCESSION AR224103  
VERSION AR224103.1 GI:23332763  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1302)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6440698-A 25 27-AUG-2002;  
FEATURES  
source  
1. .1302  
Location/Qualifiers  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224103 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Total length:	Score: 37.5
Percent Similarity:	100.00	Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
4 ACTCGACATGGATTCGTCTGCCTGCGTACGGGTGGGTGCTCC 53  
38 OleuGLYLeu 41  
|||||  
54 ACTGGGCTCG 63

Sequence name: rgep2ndb:AR269234

Sequence documentation:  
LOCUS AR269234 1302 bp DNA linear PAT 10-APR-2003  
DEFINITION Sequence 25 from patent US 6500667.  
ACCESSION AR269234  
VERSION AR269234.1 GI:29700202  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1302)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.  
TITLE Abapetyl protease 2 (Asp2) antisease oligonucleosides  
JOURNAL Patent: US 6500667-A 25 31-DEC-2002;  
FEATURES  
source  
1. .1302  
Location/Qualifiers  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269234 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Total length:	Score: 37.5
Percent Similarity:	100.00	Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Matching length:	Quality: 100.00	Total length:	Score: 100.00
Percent Similarity:	100.00	Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
4 ACTCGACATGGATTCGTCTGCCTGCGTACGGGTGGGTGCTCC 53  
38 OleuGLYLeu 41  
|||||  
54 ACTGGGCTCG 63

Sequence name: rgep2ndb:AR478789

Sequence documentation:  
LOCUS AR478789 1302 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 25 from patent US 6699671.  
ACCESSION AR478789  
VERSION AR478789.1 GI:47237509  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1302)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6699671-A 25 02-MAR-2004;  
FEATURES  
source  
1. .1302  
Location/Qualifiers  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478789 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Total length:	Score: 37.5
Percent Similarity:	100.00	Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
4 ACTCGACATGGATTCGTCTGCCTGCGTACGGGTGGGTGCTCC 53  
38 OleuGLYLeu 41  
|||||  
54 ACTGGGCTCG 63

Sequence name: rgep2ndb:AR487355

Sequence documentation:  
LOCUS AR487355 1302 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 25 from patent US 6706485.  
ACCESSION AR487355  
VERSION AR487355.1 GI:47252453  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1302)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.  
TITLE Method of identifying agents that inhibit APP processing activity  
JOURNAL Patent: US 6706485-A 25 16-MAR-2004;  
FEATURES  
source  
1. .1302  
Location/Qualifiers

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source 1..1302
        /organism="unknown"
        /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487355 ..
Alignment segment 1/1: (+)

      Quality: 104.00      Escore: 37.5
Matching length: 20      Total length: 20
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
Total Percent Similarity: 100.00      Total Percent Identity: 100.00
Gaps: 0

Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyGlyAlaPr 38
|||||
4 ACTCAGCATGTGATTCTGCTGCCACTGCGTACGCGTCTGGGTGCTCC 53
38 oLeuGlyLeu 41
|||||
54 ACTGGGCTCTG 63

Sequence name: rgep2ndb:AR531995

Sequence documentation:
LOCUS AR531995 1302 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 25 from patent US 6727074.
ACCESSION AR531995
VERSION AR531995.1 GI:53920529
KEYWORDS
SOURCE
ORGANISM Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 1302)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor
JOURNAL Patent: US 6727074-A 25 27-APR-2004;
FEATURES
source 1..1302
Location/Qualifiers
1..1302
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531995 ..
Alignment segment 1/1: (+)

      Quality: 104.00      Escore: 37.5
Matching length: 20      Total length: 20
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
Total Percent Similarity: 100.00      Total Percent Identity: 100.00
Gaps: 0

Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyGlyAlaPr 38
|||||
4 ACTCAGCATGTGATTCTGCTGCCACTGCGTACGCGTCTGGGTGCTCC 53
38 oLeuGlyLeu 41
|||||
54 ACTGGGCTCTG 63

Sequence name: rgep2ndb:AR540896

Sequence documentation:
LOCUS AR540896 1302 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 25 from patent US 6737510.
ACCESSION AR540896
VERSION AR540896.1 GI:53932409
```

```
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 1302)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
thereof
JOURNAL Patent: US 6737510-A 25 18-MAY-2004;
FEATURES
source 1..1302
Location/Qualifiers
1..1302
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540896 ..
Alignment segment 1/1: (+)

      Quality: 104.00      Escore: 37.5
Matching length: 20      Total length: 20
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
Total Percent Similarity: 100.00      Total Percent Identity: 100.00
Gaps: 0

Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyGlyAlaPr 38
|||||
4 ACTCAGCATGTGATTCTGCTGCCACTGCGTACGCGTCTGGGTGCTCC 53
38 oLeuGlyLeu 41
|||||
54 ACTGGGCTCTG 63

Sequence name: rgep2ndb:AR560106

Sequence documentation:
LOCUS AR560106 1302 bp DNA linear PAT 08-OCT-2004
DEFINITION Sequence 25 from patent US 6753163.
ACCESSION AR560106
VERSION AR560106.1 GI:53970473
KEYWORDS
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 1302)
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
Yan,R.
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses
therefor
JOURNAL Patent: US 6753163-A 25 22-JUN-2004;
FEATURES
source 1..1302
Location/Qualifiers
1..1302
/organism="unknown"
/mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560106 ..
Alignment segment 1/1: (+)

      Quality: 104.00      Escore: 37.5
Matching length: 20      Total length: 20
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
Total Percent Similarity: 100.00      Total Percent Identity: 100.00
Gaps: 0

Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyGlyAlaPr 38
|||||
4 ACTCAGCATGTGATTCTGCTGCCACTGCGTACGCGTCTGGGTGCTCC 53
```



38 OLeuGlyLeu  
|||||  
54 ACTGGGCTCTG 63

Sequence name: rgep2ndb:AX105407

Sequence documentation:  
LOCUS AX105407 1302 bp DNA linear PAT 30-APR-2001  
DEFINITION Sequence 25 from Patent WO0123533.  
ACCESSION AX105407  
VERSION AX105407.1 GI:13921522  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE  
AUTHORS Gurney,M. and Bienkowski,M.J.  
TITLE Alzheimer's disease secretase, app substrates therefor, and uses  
JOURNAL therefor  
Patent: WO 0123533-A 25 05-APR-2001;  
Pharmacia & Upjohn Company (US)  
location/Qualifiers

FEATURES  
source 1..1302  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105407 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Escore:	37.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHISGlyILEaRgLeuProLeuAArgSerGlyLeuGlyAlaAPr 38  
|||||  
4 ACTGAGCATGGATTCGTCTGCCACTGGCTAGCGGTCTGGGTGCTCC 53  
38 OLeuGlyLeu 41  
|||||  
54 ACTGGGCTCTG 63

Sequence name: rgep2ndb:AX573845

Sequence documentation:  
LOCUS AX573845 1302 bp DNA linear PAT 07-JAN-2003  
DEFINITION Sequence 25 from Patent EP1249498.  
ACCESSION AX573845  
VERSION AX573845.1 GI:27551488  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE  
AUTHORS Gurney,M. and Bienkowski,M.J.  
TITLE Alzheimer's disease secretase, app substrates therefor, and uses  
JOURNAL therefor  
Patent: EP 1249498-A 25 16-OCT-2002;  
Pharmacia & Upjohn Company (US)  
location/Qualifiers

FEATURES  
source 1..1302  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573845 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Escore:	37.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHISGlyILEaRgLeuProLeuAArgSerGlyLeuGlyAlaAPr 38  
|||||  
4 ACTGAGCATGGATTCGTCTGCCACTGGCTAGCGGTCTGGGTGCTCC 53  
38 OLeuGlyLeu 41  
|||||  
54 ACTGGGCTCTG 63

Sequence name: rgep2ndb:AX700454

Sequence documentation:  
LOCUS AX700454 1302 bp DNA linear PAT 03-APR-2003  
DEFINITION Sequence 9 from Patent WO03012089.  
ACCESSION AX700454  
VERSION AX700454.1 GI:29536243  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE  
AUTHORS von,J., Cleasby,A., Bruinzeel,W.D., Maure,S.L., Tickle,I. and  
Sharf,A.  
TITLE Crystal structure of beta-site app cleaving enzyme (bace) and use  
thereof  
JOURNAL Patent: WO 03012089-A 9 13-FEB-2003;  
Aster Technology Limited (GB) ; JANSSEN PHARMACEUTICA.N.V. (BE)  
location/Qualifiers

FEATURES  
source 1..1302  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX700454 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Escore:	37.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHISGlyILEaRgLeuProLeuAArgSerGlyLeuGlyAlaAPr 38  
|||||  
4 ACTGAGCATGGATTCGTCTGCCACTGGCTAGCGGTCTGGGTGCTCC 53  
38 OLeuGlyLeu 41  
|||||  
54 ACTGGGCTCTG 63

Sequence name: rgep2ndb:AR224123

Sequence documentation:  
LOCUS AR224123 1305 bp DNA linear PAT 26-SEP-2002  
DEFINITION Sequence 52 from patent US 6440698.  
ACCESSION AR224123  
VERSION AR224123.1 GI:23332783  
KEYWORDS  
SOURCE Unknown.

## ORGANISM Unknown.

Unclassified.

REFERENCE 1 (bases 1 to 1305)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses

JOURNAL Patent: US 6440698-A 52 27-AUG-2002;

FEATURES

source  
1. 1305  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224123 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	37.5
Matching length:	20		Total length:	20
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

```
22 ThrGlnH1sg1y1leaArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGCAGCGGATCCGGCTGCCCTGCCAGCGGCTGGGGGCGCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rgep2ndb:AR269254

Sequence documentation:

LOCUS AR269254 1305 bp DNA linear PAT 10-APR-2003

DEFINITION Sequence 52 from patent US 6500667.

ACCESSION AR269254

VERSION AR269254.1 GI:29700222

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1305)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Apatryl protease 2 (Aap2) antisense oligonucleotides

JOURNAL Patent: US 6500667-A 52 31-DEC-2002;

FEATURES

source  
1. 1305  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269254 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	37.5
Matching length:	20		Total length:	20
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Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

```
22 ThrGlnH1sg1y1leaArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGCAGCGGATCCGGCTGCCCTGCCAGCGGCTGGGGGCGCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rgep2ndb:AR478809

Sequence documentation:

LOCUS AR478809 1305 bp DNA linear PAT 14-MAY-2004

DEFINITION Sequence 52 from patent US 6699671.

ACCESSION AR478809

VERSION AR478809.1 GI:47237529

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1305)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses

JOURNAL Patent: US 6699671-A 52 02-MAR-2004;

FEATURES

source  
1. 1305  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478809 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	37.5
Matching length:	20		Total length:	20
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

```
22 ThrGlnH1sg1y1leaArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCAGCAGCGGATCCGGCTGCCCTGCCAGCGGCTGGGGGCGCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCTGGGGCTG 123
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Sequence name: rgep2ndb:AR487375

Sequence documentation:

LOCUS AR487375 1305 bp DNA linear PAT 14-MAY-2004

DEFINITION Sequence 52 from patent US 6706485.

ACCESSION AR487375

VERSION AR487375.1 GI:47252473

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1305)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Method of identifying agents that inhibit APP processing activity

JOURNAL Patent: US 6706485-A 52 16-MAR-2004;

FEATURES

source  
1. 1305  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487375 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	37.5
Matching length:	20		Total length:	20
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCGCTGGGGGGCCCC 113  
|||||  
38 OleuGlyLeu 41  
|||||  
114 CCGGGGGCTG 123

Sequence name: rgep2ndb:AR532015

## Sequence documentation:

LOCUS AR532015 1305 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 52 from patent US 6727074.  
ACCESSION AR532015  
VERSION AR532015.1 GI:53920549  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1305)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6727074-A 52 27-APR-2004;  
FEATURES Location/Qualifiers  
source 1..1305  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR532015 ..

## Alignment segment 1/1: (+)

	Quality:	104.00		Score:	37.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCGCTGGGGGGCCCC 113  
|||||  
38 OleuGlyLeu 41  
|||||  
114 CCGGGGGCTG 123

Sequence name: rgep2ndb:AR540916

## Sequence documentation:

LOCUS AR540916 1305 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 52 from patent US 6737510.  
ACCESSION AR540916  
VERSION AR540916.1 GI:5392429  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1305)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
thereof  
JOURNAL Patent: US 6737510-A 52 18-MAY-2004;  
FEATURES Location/Qualifiers  
source 1..1305  
/organism="unknown"

/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540916 ..

## Alignment segment 1/1: (+)

	Quality:	104.00		Score:	37.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCGCTGGGGGGCCCC 113  
|||||  
38 OleuGlyLeu 41  
|||||  
114 CCGGGGGCTG 123

Sequence name: rgep2ndb:AR560126

## Sequence documentation:

LOCUS AR560126 1305 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 52 from patent US 6753163.  
ACCESSION AR560126  
VERSION AR560126.1 GI:53970493  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1305)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6753163-A 52 22-JUN-2004;  
FEATURES Location/Qualifiers  
source 1..1305  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560126 ..

## Alignment segment 1/1: (+)

	Quality:	104.00		Score:	37.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCGCTGGGGGGCCCC 113  
|||||  
38 OleuGlyLeu 41  
|||||  
114 CCGGGGGCTG 123

Sequence name: rgep2ndb:AX105434

## Sequence documentation:

LOCUS AX105434 1305 bp DNA linear PAT 30-APR-2001  
DEFINITION Sequence 52 from Patent WO0123533.  
ACCESSION AX105434  
VERSION AX105434.1 GI:13921542  
KEYWORDS  
SOURCE Synthetic construct

ORGANISM synthetic construct  
other sequences; artificial sequences.

REFERENCE 1  
AUTHORS Gurney,M. and Bienkowski,M.J.  
TITLE Alzheimer's disease secretase, app substrates therefor, and uses therefor  
JOURNAL Patent: WO 013533-A 52 05-APR-2001;  
Pharmacia & Upjohn Company (US)  
FEATURES  
source Location/Qualifiers  
1..1305  
/organism="synthetic construct"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:32630"  
/note="Hu-Ap2(b) delta TM"

Alignment of: us-10-726-967a-1 x AX105434 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

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22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGCGCTGCGCGCAGCGCGCTGGGGGCGCCCC 113
38 oleuGlyLeu
114 CCTGGGGGCTG
41
123
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Sequence name: rgep2ndb:AX573872

Sequence documentation:

LOCUS AX573872 1305 bp DNA linear PAT 07-JAN-2003  
DEFINITION Sequence 52 from Patent EP1249498.  
ACCESSION AX573872  
VERSION AX573872.1 GI:27551508  
KEYWORDS

SOURCE synthetic construct  
ORGANISM synthetic construct  
other sequences; artificial sequences.

REFERENCE 1  
AUTHORS Gurney,M. and Bienkowski,M.J.  
TITLE Alzheimer's disease secretase, app substrates therefor, and uses therefor  
JOURNAL Patent: EP 1249498-A 52 16-OCT-2002;  
Pharmacia & Upjohn Company (US)  
FEATURES  
source Location/Qualifiers  
1..1305  
/organism="synthetic construct"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:32630"  
/note="Hu-Ap2(b) delta TM"

Alignment of: us-10-726-967a-1 x AX573872 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
```

64 ACCCAGCAGCGCATCCGCGCTGCGCGCAGCGCGCTGGGGGCGCCCC 113  
38 oleuGlyLeu  
114 CCTGGGGGCTG  
41  
123

Sequence name: rgep2ndb:AB050438

Sequence documentation:

LOCUS AB050438 1333 bp mRNA linear PRI 17-JUL-2001  
DEFINITION Homo sapiens BACE mRNA for beta-site APP cleaving enzyme I-432,  
complete cds.  
ACCESSION AB050438  
VERSION AB050438.1 GI:13568410  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.

REFERENCE

AUTHORS Tanahashi,H. and Tabira,T.  
TITLE Three novel alternatively spliced isoforms of the human beta-site amyloid precursor protein cleaving enzyme (BACE) and their effect on amyloid beta-peptide production  
JOURNAL Neurosci. Lett. 307 (1), 9-12 (2001)  
MEDLINE 21408467  
PUBMED 11516562

REFERENCE 2 (bases 1 to 1333)  
AUTHORS Tanahashi,H.  
TITLE Direct Submision  
JOURNAL Submitted (21-OCT-2000) Hiroshi Tanahashi, National Institute of Neuroscience, Division of Demyelinating Disease and Aging; 4-1-1, Ogawahigashi, Kodaira, Tokyo 187-8551, Japan  
(E-mail:ctanahash@ncmp.go.jp, Tel:81423412711(ex.5163), Fax:81423461747)

FEATURES

source

Location/Qualifiers

1..1333

/organism="Homo sapiens"

/mol\_type="mRNA"

/db\_xref="taxon:9606"

/issue\_type="Brain"

1..1333

/gene="BACE"

4..1302

/gene="BACE"

/note="alternative splicing isoform"

/codon\_start=1

/product="beta-site APP cleaving enzyme I-432"

/protein\_id="BAB40933.1"

/db\_xref="GI:13568411"

/translation="MAQALPMLLMWGAGVLPAGHCGHGRRLPLRSGLGAPVGLRLP  
REDEPBBPBRGSPYEMVDNLRGSGGQTYTBMVGSFPQTLNLIIVDGSNFAVG  
AAPRPRLRYRQRLSTYRDLKRGVTPYTGKMGEGELTDLGAGPPLNOSBYLA  
SVGSMLTIGIDSLYTGSLWYPIREWEYEVIVRVELNGDLMKDCENYDKSI  
VDSGTWRLRPKVFPAVKSIRKASTKFPDGMFGLQVCMQAGTTPMNIFFPYS  
LVMGEVYNOSFRITLIPQOYLRPVEDVATSGDCKFAISOSTGTGVMGAVMEGFY  
VDFPARKRIGFAVSAICHVDEPRTAAVEPFTLMDGQNNIPQTDSTLTMTIAYV  
MAICALFMLPLCLMVCQMRCLRLCQHQHDPADDSILK"

Alignment of: us-10-726-967a-1 x AB050438 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
```

67 ACCGACGACGCGCTGCGCTGCGGAGCGGCGGCGCGCC 116  
38 o|e|u|g|y|e|u 41  
117 CCTGGGGCTG 126

Sequence name: rgep2ndb:BD235895

Sequence documentation:

LOCUS BD235895 1341 bp DNA linear PAT 17-JUL-2003  
DEFINITION Alzheimer's disease secretase.  
ACCESSION BD235895  
VERSION BD235895.1 GI:33045665  
KEYWORDS JP 2002526081-A/11.  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
1 (bases 1 to 1341)

REFERENCE  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase  
JOURNAL Patent: JP 2002526081-A 11 20-AUG-2002;  
COMMENT PHARMACIA AND UPJOHN CO  
OS Homo sapiens (human)  
PN JP 2002526081-A/11  
PD 20-AUG-2002  
PF 23-SEP-1999 JP 2000574268  
PR 24-SEP-1998 US 60/101594  
PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI  
HEINRICHSON,  
PT LUIS A PARODI, RIGIANG YAN  
PC C12N15/09,A61K45/00,A61P25/28,C07K14/47,C07K16/18,C12N1/15, PC  
C12N1/19,  
PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/ 15,  
G01N33/50//C12N1/21,C12R1/19,C12N15/00,C12N5/00 CC

Alzheimer's disease secretase  
Alzheimer's disease secretase  
FT source 1. 1341  
FT Location/Qualifiers  
1. 1341  
/organism="Homo sapiens (human)".  
/organism="Homo sapiens"  
/mol\_type="genomic DNA"  
/db\_xref="taxon:9606"

FEATURES  
source  
1. 1341  
Location/Qualifiers  
/organism="Homo sapiens (human)".  
/organism="Homo sapiens"  
/mol\_type="genomic DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235895 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
43 ACCGACGACGCGCATCGGCTGCGCGGAGCGGCGGCGCGCC 92  
38 o|e|u|g|y|e|u 41  
93 CCTGGGGCTG 102

Sequence name: rgep2ndb:AR224101

Sequence documentation:

LOCUS AR224101 1341 bp DNA linear PAT 26-SEP-2002  
DEFINITION Sequence 21 from patent US 6440698.

ACCESSION AR224101  
VERSION AR224101.1 GI:23332761  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1341)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
JOURNAL Patent: US 6440698-A 21 27-AUG-2002;  
FEATURES source  
1. 1341  
Location/Qualifiers  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224101 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
43 ACCGACGACGCGCATCGGCTGCGCGGAGCGGCGGCGCGCC 92  
38 o|e|u|g|y|e|u 41  
93 CCTGGGGCTG 102

Sequence name: rgep2ndb:AR269232

Sequence documentation:

LOCUS AR269232 1341 bp DNA linear PAT 10-APR-2003  
DEFINITION Sequence 21 from patent US 6500667.  
ACCESSION AR269232  
VERSION AR269232.1 GI:29700200  
KEYWORDS Unknown.  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1341)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Aspartyl protease 2 (asp2) antisense oligonucleotides  
JOURNAL Patent: US 6500667-A 21 31-DEC-2002;  
FEATURES source  
1. 1341  
Location/Qualifiers  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269232 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
43 ACCGACGACGCGCATCGGCTGCGCGGAGCGGCGGCGCGCC 92

38 OLeuGlyLeu 41  
|||||  
93 CCGGGGCTG 102

Sequence name: rgep2ndb:AR478787

Sequence documentation:

LOCUS AR478787 1341 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 21 from patent US 6699671.  
ACCESSION AR478787  
VERSION AR478787.1 GI:47237507  
KEYWORDS  
SOURCE  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1341)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6699671-A 21 02-MAR-2004;  
FEATURES Location/Qualifiers  
source 1..1341  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478787 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrglnHsglyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
43 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 92  
38 OLeuGlyLeu 41  
|||||  
93 CCGGGGCTG 102

Sequence name: rgep2ndb:AR487353

Sequence documentation:

LOCUS AR487353 1341 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 21 from patent US 6706485.  
ACCESSION AR487353  
VERSION AR487353.1 GI:47252451  
KEYWORDS  
SOURCE Unknown.

ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1341)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Method of identifying agents that inhibit APP processing activity  
JOURNAL Patent: US 6706485-A 21 16-MAR-2004;  
FEATURES Location/Qualifiers  
source 1..1341  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487353 ..

Alignment segment 1/1: (+)

Quality: 104.00

Score: 37.5

Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrglnHsglyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
43 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 92  
38 OLeuGlyLeu 41  
|||||  
93 CCGGGGCTG 102

Sequence name: rgep2ndb:AR531993

Sequence documentation:

LOCUS AR531993 1341 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 21 from patent US 6727074.  
ACCESSION AR531993  
VERSION AR531993.1 GI:53920527  
KEYWORDS  
SOURCE Unknown.

ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1341)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6727074-A 21 27-APR-2004;  
FEATURES Location/Qualifiers  
source 1..1341  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531993 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrglnHsglyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
43 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 92  
38 OLeuGlyLeu 41  
|||||  
93 CCGGGGCTG 102

Sequence name: rgep2ndb:AR540894

Sequence documentation:

LOCUS AR540894 1341 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 21 from patent US 6737510.  
ACCESSION AR540894  
VERSION AR540894.1 GI:53932407  
KEYWORDS  
SOURCE Unknown.

ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1341)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor

JOURNAL Patent: US 6737510-A 21 18-MAY-2004;  
FEATURES Location/Qualifiers  
Source 1..1341  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540894 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
43 ACCGACGACGCGATCCGGCTGCCCTGGCGACGCGCTGGGGGGCCCC 92

38 OLeuGlyLeu  
|||  
93 CCTGGGGGCTG 102

Sequence name: rgep2ndb:AR560104

Sequence documentation:

LOCUS AR560104 1341 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 21 from patent US 6753163.  
ACCESSION AR560104  
VERSION AR560104.1 GI:53970471

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

1 (bases 1 to 1341)  
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.

TITLE  
Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor

JOURNAL  
Patent: US 6753163-A 21 22-JUN-2004;  
Location/Qualifiers  
1..1341  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560104 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
43 ACCGACGACGCGATCCGGCTGCCCTGGCGACGCGCTGGGGGGCCCC 92

38 OLeuGlyLeu  
|||  
93 CCTGGGGGCTG 102

Sequence name: rgep2ndb:AX105403

Sequence documentation:

LOCUS AX105403 1341 bp DNA linear PAT 30-APR-2001  
DEFINITION Sequence 21 from Patent WO0123533.

ACCESSION AX105403  
VERSION AX105403.1 GI:13921520  
KEYWORDS  
SOURCE  
ORGANISM  
Homo sapiens (human)  
Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE  
1 Gurney,M. and Bienkowski,M.J.  
Alzheimer's disease secretase, app substrates therefor, and uses  
therefor

JOURNAL  
Patent: WO 0123533-A 21 05-APR-2001;  
Pharmacia & Upjohn Company (US)  
Location/Qualifiers  
1..1341  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105403 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
43 ACCGACGACGCGATCCGGCTGCCCTGGCGACGCGCTGGGGGGCCCC 92

38 OLeuGlyLeu  
|||  
93 CCTGGGGGCTG 102

Sequence name: rgep2ndb:AX573841

Sequence documentation:

LOCUS AX573841 1341 bp DNA linear PAT 07-JAN-2003  
DEFINITION Sequence 21 from Patent EP1249498.  
ACCESSION AX573841  
VERSION AX573841.1 GI:27551486

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

TITLE

JOURNAL

Patent: EP 1249498-A 21 16-OCT-2002;  
Pharmacia & Upjohn Company (US)  
Location/Qualifiers  
1..1341  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573841 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
43 ACCGACGACGCGATCCGGCTGCCCTGGCGACGCGCTGGGGGGCCCC 92

38 OLeuGlyLeu  
|||  
93 CCTGGGGGCTG 102

Sequence name: rgep2ndb:AX105403

Sequence documentation:

LOCUS AX105403 1341 bp DNA linear PAT 30-APR-2001  
DEFINITION Sequence 21 from Patent WO0123533.

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
43 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 92  
|||||  
38 oLeuGlyLeu 41  
|||||  
93 CCGGGGCGCTG 102

Sequence name: rgep2ndb:BD235899

## Sequence documentation:

LOCUS BD235899 1362 bp DNA linear PAT 17-JUL-2003  
DEFINITION Alzheimer's disease secretase.  
ACCESSION BD235899  
VERSION BD235899.1 GI:33045669  
KEYWORDS JP 2002526081-A/15.  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.  
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.

REFERENCE 1 (bases 1 to 1362)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.

TITLE Alzheimer's disease secretase  
JOURNAL Patent: JP 2002526081-A 15 20-AUG-2002;  
COMMENT PHARMACIA AND UPJOHN CO  
OS Homo sapiens (human)  
PN JP 2002526081-A/15  
PD 20-AUG-2002  
PF 23-SEP-1999 JP 2000574268  
PI 24-SEP-1998 US 60/101594  
PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI  
HEINRICHSON,  
PI LUIS A PARODI, RIOTANG YAN  
PC C12N15/09,A61K45/00,A61P25/28,C07K14/47,C07K16/18,C12N1/15, PC  
C12N1/19,  
PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/15,  
PC G01N33/50//((C12N1/21,C12R1:19),C12N15/00,C12N5/00 CC  
Alzheimer's disease secretase  
FH Key Location/Qualifiers  
FT source 1..1362  
FT location/Qualifiers  
1..1362 /organism='Homo sapiens (human)'.  
/organism='Homo sapiens'  
/mol\_type='genomic DNA'  
/db\_xref='taxon:9606'

FEATURES  
source  
1..1362 location/Qualifiers  
/organism='Homo sapiens (human)'.  
/organism='Homo sapiens'  
/mol\_type='genomic DNA'  
/db\_xref='taxon:9606'

Alignment of: us-10-726-967a-1 x BD235899 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 37.5
Matching Percent Similarity:	20	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113  
|||||  
38 oLeuGlyLeu 41  
|||||  
114 CCGGGGCGCTG 123

Sequence name: rgep2ndb:AR224105

## Sequence documentation:

LOCUS AR224105 1362 bp DNA linear PAT 26-SEP-2002  
DEFINITION Sequence 29 from patent US 6440698.  
ACCESSION AR224105  
VERSION AR224105.1 GI:23332765  
KEYWORDS  
SOURCE unknown.  
ORGANISM unknown.  
REFERENCE 1 (bases 1 to 1362)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
JOURNAL Patent: US 6440698-A 29 27-AUG-2002;  
FEATURES Location/Qualifiers  
1..1362  
source /organism='unknown'  
/mol\_type='genomic DNA'

Alignment of: us-10-726-967a-1 x AR224105 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 37.5
Matching Percent Similarity:	20	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113  
|||||  
38 oLeuGlyLeu 41  
|||||  
114 CCGGGGCGCTG 123

Sequence name: rgep2ndb:AR269236

## Sequence documentation:

LOCUS AR269236 1362 bp DNA linear PAT 10-APR-2003  
DEFINITION Sequence 29 from patent US 6500667.  
ACCESSION AR269236  
VERSION AR269236.1 GI:29700204  
KEYWORDS  
SOURCE unknown.  
ORGANISM unknown.  
REFERENCE 1 (bases 1 to 1362)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.

TITLE Aspartyl protease 2 (Asp2) antisense oligonucleotides  
JOURNAL Patent: US 6500667-A 29 31-DEC-2002;  
FEATURES Location/Qualifiers  
1..1362  
source /organism='unknown'  
/mol\_type='genomic DNA'

Alignment of: us-10-726-967a-1 x AR269236 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 37.5
Matching Percent Similarity:	20	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

## Alignment:



22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGGGGGGGGCCCC 113  
38 oLeuGlyLeu  
|||||  
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AR478791

Sequence documentation:

LOCUS AR478791 1362 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 29 from patent US 6699671.  
ACCESSION AR478791  
VERSION AR478791.1 GI:47237511  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1362)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6699671-A 29 02-MAR-2004;  
FEATURES  
source 1. .1362  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478791 ..

Alignment segment 1/1: (+)

Quality: 104.00  
Matching length: 20 Total length: 37.5  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGGGGGGGGCCCC 113  
38 oLeuGlyLeu  
|||||  
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AR487357

Sequence documentation:

LOCUS AR487357 1362 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 29 from patent US 6706485.  
ACCESSION AR487357  
VERSION AR487357.1 GI:47252455  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1362)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Method of identifying agents that inhibit APP processing activity  
JOURNAL Patent: US 6706485-A 29 16-MAR-2004;  
FEATURES  
source 1. .1362  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487357 ..

Alignment segment 1/1: (+)  
Quality: 104.00  
Matching length: 20 Total length: 37.5  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGGGGGGGGCCCC 113  
38 oLeuGlyLeu  
|||||  
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AR531997

Sequence documentation:

LOCUS AR531997 1362 bp DNA linear PAT 08-OCT-2004.  
DEFINITION Sequence 29 from patent US 6727074.  
ACCESSION AR531997  
VERSION AR531997.1 GI:53920531  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1362)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6727074-A 29 27-APR-2004;  
FEATURES  
source 1. .1362  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531997 ..

Alignment segment 1/1: (+)

Quality: 104.00  
Matching length: 20 Total length: 37.5  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGGGGGGGGCCCC 113  
38 oLeuGlyLeu  
|||||  
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AR540898

Sequence documentation:

LOCUS AR540898 1362 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 29 from patent US 6737510.  
ACCESSION AR540898  
VERSION AR540898.1 GI:53932411  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1362)

Alignment of: us-10-726-967a-1 x AR540898 ..

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses

JOURNAL Patent: US 6737510-A 29 18-MAY-2004;

FEATURES Location/Qualifiers

1..1362  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540898 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38

64 ACCGACGACGGCATCCGCTGCCGACGGCGCTGGGGGGCGCCCC 113

38 oLeuGlyLeu

114 CCTGGGGCTG

41

123

Sequence name: rgep2ndb:AR560108

Sequence documentation:

LOCUS AR560108 1362 bp DNA linear PAT 08-OCT-2004

DEFINITION Sequence 29 from patent US 6753163.

ACCESSION AR560108

VERSION AR560108.1 GI:53970475

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

TITLE

JOURNAL

FEATURES

source

Alignment of: us-10-726-967a-1 x AR560108 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38

64 ACCGACGACGGCATCCGCTGCCGACGGCGCTGGGGGGCGCCCC 113

38 oLeuGlyLeu

114 CCTGGGGCTG

Sequence name: rgep2ndb:AX105411

Sequence documentation:

LOCUS AX105411 1362 bp DNA linear PAT 30-APR-2001

DEFINITION Sequence 29 from Patent WO0123533.

ACCESSION AX105411

VERSION AX105411.1 GI:13921524

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

TITLE

JOURNAL

FEATURES

source

Alignment of: us-10-726-967a-1 x AX105411 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38

64 ACCGACGACGGCATCCGCTGCCGACGGCGCTGGGGGGCGCCCC 113

38 oLeuGlyLeu

114 CCTGGGGCTG

41

123

Sequence name: rgep2ndb:AX573849

Sequence documentation:

LOCUS AX573849 1362 bp DNA linear PAT 07-JAN-2003

DEFINITION Sequence 29 from Patent EPI249498.

ACCESSION AX573849

VERSION AX573849.1 GI:27551490

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

TITLE

JOURNAL

FEATURES

source

Alignment of: us-10-726-967a-1 x AX573849 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.5
Matching length:	20	Total length:	20

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

```

22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyAlaIAPr 38
   |||||
64 ACCCAGCAGCGCATCCGGCTGCCCTCGCAGCGGCTGGGGGGGCGCCCC 113
   |||||
38 OLeuGlyLeu 41
   |||||
114 CCTGGGGCTG 123

```

Sequence name: rgep2ndb:CQ772944

## Sequence documentation:

LOCUS CQ772944 1365 bp DNA linear PAT 04-MAR-2004  
DEFINITION Sequence 9 from Patent WO2004011641.  
ACCESSION CQ772944  
VERSION CQ772944.1 GI:45126408  
KEYWORDS  
SOURCE synthetic construct  
ORGANISM synthetic construct  
REFERENCE 1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and  
AUTHORS Shah,A.  
TITLE Crystal structure of beta-site app-cleaving enzyme (bace)  
JOURNAL mutant and uses thereof  
Patent: WO 2004011641-A 9 05-FEB-2004;  
Aetex Technology Limited (GB)  
FEATURES  
source 1. 1365  
/organism="synthetic construct"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:32630"  
/note="DNA sequence coding for the BACE WT R57DEL."

Alignment of: us-10-726-967a-1 x CQ772944 ..

## Alignment segment 1/1: (+)

Matching length: 104.00 Total length: 37.5  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

```

22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyAlaIAPr 38
   |||||
70 ACCCAGCAGCGCATCCGGCTGCCCTCGCAGCGGCTGGGGGGGCGCCCC 119
   |||||
38 OLeuGlyLeu 41
   |||||
120 CCTGGGGCTG 129

```

Sequence name: rgep2ndb:CQ772936

## Sequence documentation:

LOCUS CQ772936 1368 bp DNA linear PAT 04-MAR-2004  
DEFINITION Sequence 1 from Patent WO2004011641.  
ACCESSION CQ772936  
VERSION CQ772936.1 GI:45126404  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
REFERENCE 1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and  
AUTHORS

TITLE Shah,A.  
Crystal structure of beta-site app-cleaving enzyme (bace)

JOURNAL mutant and uses thereof  
Patent: WO 2004011641-A 1 05-FEB-2004;  
Aetex Technology Limited (GB)

## FEATURES

source 1. 1368  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x CQ772936 ..

## Alignment segment 1/1: (+)

Matching length: 104.00 Total length: 37.5  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

```

22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyAlaIAPr 38
   |||||
70 ACCCAGCAGCGCATCCGGCTGCCCTCGCAGCGGCTGGGGGGGCGCCCC 119
   |||||
38 OLeuGlyLeu 41
   |||||
120 CCTGGGGCTG 129

```

Sequence name: rgep2ndb:CQ772940

## Sequence documentation:

LOCUS CQ772940 1368 bp DNA linear PAT 04-MAR-2004  
DEFINITION Sequence 5 from Patent WO2004011641.  
ACCESSION CQ772940  
VERSION CQ772940.1 GI:45126406  
KEYWORDS  
SOURCE synthetic construct  
ORGANISM synthetic construct  
REFERENCE 1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and  
AUTHORS Shah,A.  
TITLE Crystal structure of beta-site app-cleaving enzyme (bace)  
JOURNAL mutant and uses thereof  
Patent: WO 2004011641-A 5 05-FEB-2004;  
Aetex Technology Limited (GB)  
FEATURES  
source 1. 1368  
/organism="synthetic construct"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:32630"  
/note="DNA sequence coding for the BACE WT R56KR57K."

Alignment of: us-10-726-967a-1 x CQ772940 ..

## Alignment segment 1/1: (+)

Matching length: 104.00 Total length: 37.5  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

```

22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyAlaIAPr 38
   |||||
70 ACCCAGCAGCGCATCCGGCTGCCCTCGCAGCGGCTGGGGGGGCGCCCC 119
   |||||
38 OLeuGlyLeu 41

```

|||||  
120 CCTGGGGCTG

129

Sequence name: rgep2ndb:CQ772942

Sequence documentation:

LOCUS CQ772942 1368 bp DNA linear PAT 04-MAR-2004  
DEFINITION Sequence 7 from Patent WO2004011641.  
ACCESSION CQ772942  
VERSION CQ772942.1 GI:45126407  
KEYWORDS  
SOURCE  
ORGANISM  
synthetic construct  
other sequences; artificial sequences.

REFERENCE

1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and Shah,A.  
Crystal structure of beta-site app-cleaving enzyme (bace)

JOURNAL

Patent: WO 2004011641-A 7 05-FEB-2004;  
Astex Technology Limited (GB)

FEATURES

source  
1..1368  
Location/Qualifiers

/organism="synthetic construct"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:32630"

/note="DNA sequence coding for the BACE WT R57K."

Alignment of: us-10-726-967a-1 x CQ772942 ..

Alignment segment 1/1: (+)

Matching	Percent Similarity	100.00	Matching	Percent Identity	100.00
Total	Percent Similarity	100.00	Total	Percent Identity	100.00
Gaps:		0			

Alignment:

22 ThrGlnHISGlyIleArgLeuProleuArgSerGlyLeuGlyAlaPr 38  
|||||  
70 ACCGACGACGGCATCCGCTGCCCTGCGACGCGCTGGGGGGCCCC 119  
|||||  
38 olenglyleu 41  
|||||  
120 CCTGGGGCTG 129

Sequence name: rgep2ndb:CQ772948

Sequence documentation:

LOCUS CQ772948 1368 bp DNA linear PAT 04-MAR-2004  
DEFINITION Sequence 13 from Patent WO2004011641.  
ACCESSION CQ772948  
VERSION CQ772948.1 GI:45126410  
KEYWORDS  
SOURCE  
ORGANISM  
synthetic construct  
other sequences; artificial sequences.

REFERENCE

1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and Shah,A.  
Crystal structure of beta-site app-cleaving enzyme (bace)

JOURNAL

Patent: WO 2004011641-A 13 05-FEB-2004;  
Astex Technology Limited (GB)

FEATURES

source  
1..1368  
Location/Qualifiers

/organism="synthetic construct"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:32630"

/note="DNA sequence coding for the BACE N->Q R56KR57K no His."

Alignment of: us-10-726-967a-1 x CQ772948 ..  
Alignment segment 1/1: (+)

Matching	Length	104.00	Matching	Length	37.5
Total	Percent Similarity	100.00	Total	Percent Identity	100.00
Gaps:		0			

Alignment:

22 ThrGlnHISGlyIleArgLeuProleuArgSerGlyLeuGlyAlaPr 38  
|||||  
70 ACCGACGACGGCATCCGCTGCCCTGCGACGCGCTGGGGGGCCCC 119  
|||||  
38 olenglyleu 41  
|||||  
120 CCTGGGGCTG 129

Sequence name: rgep2ndb:AF338817

Sequence documentation:

LOCUS AF338817 1374 bp mRNA linear PRI 21-MAY-2002  
DEFINITION Homo sapiens beta-site APP cleaving enzyme type C mRNA, complete

ACCESSION

AF338817  
VERSION AF338817.1 GI:13699247

KEYWORDS

SOURCE

ORGANISM

Homo sapiens (human)  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.

REFERENCE

1 (bases 1 to 1374)  
Bernalt,R., Michel,B., De Pietri Tonelli,D., Zacheetti,D.,  
Simons,K. and Keller,P.

AUTHORS

Splice variants of the beta-site APP-cleaving enzyme BACE1 in human  
brain and pancreas

JOURNAL

Biochem. Biophys. Res. Commun. 293 (1), 30-37 (2002)

MEDLINE

22049977  
PUBMED  
12054559  
2 (bases 1 to 1374)  
Zacheetti,D., De Pietri Tonelli,D. and Schnurbus,R.

AUTHORS

Direct Submission  
Submitted (19-JAN-2001) Ddbit, San Raffaele Scientific Institute,  
via Olgettina 58, Milano, MI 20132, Italy

JOURNAL

via Olgettina 58, Milano, MI 20132, Italy

FEATURES

source  
1..1374  
Location/Qualifiers

/organism="Homo sapiens"  
/mol\_type="mRNA"  
/db\_xref="taxon:9606"  
/feature\_type="exocrine pancreas"

1..1374

/note="BACE-1C; potential splice variant of beta-site APP  
cleaving enzyme (BACE)"

CDS

/product="beta-site APP cleaving enzyme type C"  
/protein\_id="AAK38375.1"

translation

"MAQALPWLTLMMGAVLPAGHTGRIPLRSGAGAPLGLRLP  
RETDEPERPERGSGFVEMVDNLKSGGQGVYEMTGSPPQTLNIIIVDTSSNFAVG  
AAPHFLRRYOROLSTYRDLRGVVPYVPGKMBELGTDLPDLSLEPPDSLVVO  
THVNLPSLOLCGAGPINOSEVVASVGSMTIGSDHSLSLTGSLMTPTPRREYEV  
IIVAVEINGDPLRDCKRYNDKSLVSGTNNLRPKVFEAAVAKSIKASSTKSPD  
GFWLSEQLVCMQAGITPWNIPFVLSILMGEVTVNQSFRTILPQVLRPEVDVATSD  
DCYKFAISQSSSTGTVMGAVIMEGYYVFDRAKRIIGFAVSAACHVHDEFRTAAVGGPV  
TLMDKCGYNIPTQDESTIMTIAVYMAICALFWLPCLMVCQRCLRQRQHDPA  
DLSILK"

Alignment of: us-10-726-967a-1 x AF338817 ..

Alignment segment 1/1: (+)

Quality: 104.00      Score: 37.6  
Matching length: 20      Total length: 20  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnH1SGly1LeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCGAGCAGCGCATCCGGCTGCCCTGGCGAGCGGCTGGGGGGGCCCC 113  
|||||  
38 OLeuGlyLeu 41  
|||||  
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb.BD235896

## Sequence documentation:

LOCUS BD235896 1380 bp DNA linear PAT 17-JUL-2003  
DEFINITION Alzheimer's disease secretase.  
ACCESSION BD235896  
VERSION BD235896.1 GI:33045666  
KEYWORDS JP 2002526081-A/12.  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
1 (bases 1 to 1380)  
Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and  
Van,R.

REFERENCE  
AUTHORS Alzheimer's disease secretase  
Patent: JP 2002526081-A 12 20-AUG-2002;  
PHARMACIA AND UPJOHN CO  
OS Homo sapiens (human)  
PN JP 2002526081-A/12  
PD 20-AUG-2002  
PF 23-SEP-1999 JP 2000574268  
PR 24-SEP-1998 US 60/101594  
PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI  
HEINRIKSON,  
PI LUIS A PARODI, RIOIANG VAN  
PC C12N15/09,A61K45/00,A61P25/28,C07K14/47,C07K16/18,C12N1/15, PC  
C12N1/19,

PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/PC  
15,  
PC G01N33/50/(C12N1/21,C12R1:19),C12N15/00,C12N5/00 CC  
Alzheimer's disease secretase  
FH Key Location/Qualifiers  
FT source 1..1380  
FT location/Qualifiers  
1..1380  
/organism="Homo sapiens (human)"  
/mol\_type="genomic DNA"  
/db\_xref="taxon:9606"

## FEATURES

source  
1..1380  
/organism="Homo sapiens (human)"  
/mol\_type="genomic DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235896 ..

## Alignment segment 1/1: (+)

Quality: 104.00      Score: 37.6  
Matching length: 20      Total length: 20  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnH1SGly1LeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
114 CCTGGGGGCTG 123

82 ACCGAGCAGCGCATCCGGCTGCCCTGGCGAGCGGCTGGGGGGGCCCC 131

38 OLeuGlyLeu 41  
|||||  
132 CCTGGGGGCTG 141

Sequence name: rgep2ndb.BD235900

## Sequence documentation:

LOCUS BD235900 1380 bp DNA linear PAT 17-JUL-2003  
DEFINITION Alzheimer's disease secretase.  
ACCESSION BD235900  
VERSION BD235900.1 GI:33045670  
KEYWORDS JP 2002526081-A/16.  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
1 (bases 1 to 1380)  
Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and  
Van,R.

REFERENCE  
AUTHORS Alzheimer's disease secretase  
Patent: JP 2002526081-A 16 20-AUG-2002;  
PHARMACIA AND UPJOHN CO  
OS Homo sapiens (human)  
PN JP 2002526081-A/16  
PD 20-AUG-2002  
PF 23-SEP-1999 JP 2000574268  
PR 24-SEP-1998 US 60/101594  
PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI  
HEINRIKSON,  
PI LUIS A PARODI, RIOIANG VAN  
PC C12N15/09,A61K45/00,A61P25/28,C07K14/47,C07K16/18,C12N1/15, PC  
C12N1/19,

PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/PC  
15,  
PC G01N33/50/(C12N1/21,C12R1:19),C12N15/00,C12N5/00 CC  
Alzheimer's disease secretase  
FH Key Location/Qualifiers  
FT source 1..1380  
FT location/Qualifiers  
1..1380  
/organism="Homo sapiens (human)"  
/mol\_type="genomic DNA"  
/db\_xref="taxon:9606"

## FEATURES

source  
1..1380  
/organism="Homo sapiens (human)"  
/mol\_type="genomic DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235900 ..

## Alignment segment 1/1: (+)

Quality: 104.00      Score: 37.6  
Matching length: 20      Total length: 20  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnH1SGly1LeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCGAGCAGCGCATCCGGCTGCCCTGGCGAGCGGCTGGGGGGGCCCC 113  
|||||  
38 OLeuGlyLeu 41  
|||||  
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb.AR224102

## Sequence documentation:

LOCUS AR224102 1380 bp DNA linear PAT 26-SEP-2002  
DEFINITION Sequence 23 from patent US 6440698.

ACCESSION AR224102  
VERSION AR224102.1 GI:23332762

KEYWORDS  
SOURCE  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof

JOURNAL Patent: US 6440698-A 23 27-AUG-2002;

FEATURES Location/Qualifiers  
1..1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224102 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 Thrglnhlglytleargleuproleuargserglyleuglygla1Apr 38
|||||
82 ACCGACGACGCGCATCCGGCTGCGCGACGCGCTGGGGGCGCCCC 131
|||||
38 oleuglyleu 41
|||||
132 CCTGGGGCTG 141
```

Sequence name: rgep2ndb:AR224106

Sequence documentation:

LOCUS AR224106 1380 bp DNA linear PAT 26-SEP-2002

DEFINITION Sequence 31 from patent US 6440698.

ACCESSION AR224106

VERSION AR224106.1 GI:23332766

KEYWORDS  
SOURCE  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof

JOURNAL Patent: US 6440698-A 31 27-AUG-2002;

FEATURES Location/Qualifiers  
1..1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224106 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 Thrglnhlglytleargleuproleuargserglyleuglygla1Apr 38
|||||
|||||
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64 ACCGACGACGCGCATCCGGCTGCGCGACGCGCTGGGGGCGCCCC 113

38 oleuglyleu 41

114 CCTGGGGCTG 123

Sequence name: rgep2ndb:AR269233

Sequence documentation:

LOCUS AR269233 1380 bp DNA linear PAT 10-APR-2003

DEFINITION Sequence 23 from patent US 6500667.

ACCESSION AR269233

VERSION AR269233.1 GI:29700201

KEYWORDS  
SOURCE  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Aspartyl protease 2 (Asp2) antisense oligonucleotides

JOURNAL Patent: US 6500667-A 23 31-DEC-2002;

FEATURES Location/Qualifiers  
1..1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269233 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 Thrglnhlglytleargleuproleuargserglyleuglygla1Apr 38
|||||
82 ACCGACGACGCGCATCCGGCTGCGCGACGCGCTGGGGGCGCCCC 131
|||||
38 oleuglyleu 41
|||||
132 CCTGGGGCTG 141
```

Sequence name: rgep2ndb:AR269237

Sequence documentation:

LOCUS AR269237 1380 bp DNA linear PAT 10-APR-2003

DEFINITION Sequence 31 from patent US 6500667.

ACCESSION AR269237

VERSION AR269237.1 GI:29700205

KEYWORDS  
SOURCE  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Aspartyl protease 2 (Asp2) antisense oligonucleotides

JOURNAL Patent: US 6500667-A 31 31-DEC-2002;

FEATURES Location/Qualifiers  
1..1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269237 ..

Alignment segment 1/1: (+)

Quality: 104.00

Score: 37.6

Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrglnHISGLYIleAArgLeuProleuAArgSerGlyLeuGlyAlaAPr 38  
|||||  
64 ACCCGACACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCGCCCC 113  
|||  
38 OLeuGlyLeu 41  
|||||  
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AR478788

Sequence documentation:

LOCUS AR478788 1380 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 23 from patent US 6699671.  
ACCESSION AR478788  
VERSION AR478788.1 GI:47237508

KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
thereforJOURNAL Patent: US 6699671-A 23 02-MAR-2004;  
FEATURES Location/Qualifierssource 1. 1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478788 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 37.6  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrglnHISGLYIleAArgLeuProleuAArgSerGlyLeuGlyAlaAPr 38  
|||||  
82 ACCCGACACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCGCCCC 131  
|||  
38 OLeuGlyLeu 41  
|||||  
132 CCTGGGGGCTG 141

Sequence name: rgep2ndb:AR478792

Sequence documentation:

LOCUS AR478792 1380 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 31 from patent US 6699671.  
ACCESSION AR478792  
VERSION AR478792.1 GI:47237512

KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor

JOURNAL Patent: US 6699671-A 31 02-MAR-2004;  
FEATURES Location/Qualifiers

source 1. 1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478792 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 37.6  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrglnHISGLYIleAArgLeuProleuAArgSerGlyLeuGlyAlaAPr 38  
|||||  
64 ACCCGACACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCGCCCC 113  
|||  
38 OLeuGlyLeu 41  
|||||  
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AR487354

Sequence documentation:

LOCUS AR487354 1380 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 23 from patent US 6706485.  
ACCESSION AR487354  
VERSION AR487354.1 GI:47252452

KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.TITLE Method of identifying agents that inhibit APP processing activity  
JOURNAL Patent: US 6706485-A 23 16-MAR-2004;  
FEATURES Location/Qualifierssource 1. 1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487354 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 37.6  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrglnHISGLYIleAArgLeuProleuAArgSerGlyLeuGlyAlaAPr 38  
|||||  
82 ACCCGACACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCGCCCC 131  
|||  
38 OLeuGlyLeu 41  
|||||  
132 CCTGGGGGCTG 141

Sequence name: rgep2ndb:AR487358

Sequence documentation:

LOCUS AR487358 1380 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 31 from patent US 6706485.  
ACCESSION AR487358

VERSION AR487358.1 GI:47252456  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1380)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Method of identifying agents that inhibit APP processing activity  
JOURNAL Patent: US 6706485-A 3116-MAR-2004;  
FEATURES Location/Qualifiers  
source 1..1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487358 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Total length:	Score: 37.6
Percent Similarity:	100.00	Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps: 0			

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCAGCAGCGCATCCGCTGCCCTGCGCAGCGGCTGGGGGCGCC 113  
38 OleuGlyLeu  
|||||  
114 CCTGGGCGCTG 123

Sequence name: rgep2ndb:AR531994

Sequence documentation:

LOCUS AR531994 1380 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 23 from patent US 6727074.  
ACCESSION AR531994  
VERSION AR531994.1 GI:53920528  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1380)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
JOURNAL Patent: US 6727074-A 23 27-APR-2004;  
FEATURES Location/Qualifiers  
source 1..1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531994 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Total length:	Score: 37.6
Percent Similarity:	100.00	Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps: 0			

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
82 ACCCAGCAGCGCATCCGCTGCCCTGCGCAGCGGCTGGGGGCGCC 131

38 OleuGlyLeu  
|||||  
132 CCTGGGCGCTG 141

Sequence name: rgep2ndb:AR531998

Sequence documentation:  
LOCUS AR531998 1380 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 31 from patent US 6727074.  
ACCESSION AR531998  
VERSION AR531998.1 GI:53920532  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1380)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
JOURNAL Patent: US 6727074-A 31 27-APR-2004;  
FEATURES Location/Qualifiers  
source 1..1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531998 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Total length:	Score: 37.6
Percent Similarity:	100.00	Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps: 0			

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCAGCAGCGCATCCGCTGCCCTGCGCAGCGGCTGGGGGCGCC 113  
38 OleuGlyLeu  
|||||  
114 CCTGGGCGCTG 123

Sequence name: rgep2ndb:AR540895

Sequence documentation:  
LOCUS AR540895 1380 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 23 from patent US 6737510.  
ACCESSION AR540895  
VERSION AR540895.1 GI:53932408  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1380)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
JOURNAL Patent: US 6737510-A 23 18-MAY-2004;  
FEATURES Location/Qualifiers  
source 1..1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540895 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Total length:	Score: 37.6
Percent Similarity:	100.00	Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps: 0			



Matching length: 20 Total length: 20  
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
 Gaps: 0

Alignment:

```

22 ThrGlnHtAGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
   |||||
82 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGGCTGGGGGGGCCCC 131
   |||||
38 oLeuGlyLeu 41
   |||||
132 CCTGGGGCTG 141

```

Sequence name: rgep2ndb:AR540899

Sequence documentation:

LOCUS AR540899 1380 bp DNA linear PAT 08-OCT-2004  
 DEFINITION Sequence 31 from patent US 6737510.  
 ACCESSION AR540899  
 VERSION AR540899.1 GI:53932412  
 KEYWORDS  
 SOURCE Unknown.  
 ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
 Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
 thereof  
 Patent: US 6737510-A 31 18-MAY-2004,  
 Location/Qualifiers  
 1. 1380  
 /organism="unknown"  
 /mol\_type="genomic DNA"

FEATURES

source

Alignment of: us-10-726-967a-1 x AR540899 ..

Alignment segment 1/1: (+)

Matching length:	20	Total length:	37.6
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHtAGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
   |||||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGGCTGGGGGGGCCCC 113
   |||||
38 oLeuGlyLeu 41
   |||||
114 CCTGGGGCTG 123

```

Sequence name: rgep2ndb:AR560105

Sequence documentation:

LOCUS AR560105 1380 bp DNA linear PAT 08-OCT-2004  
 DEFINITION Sequence 23 from patent US 6753163.  
 ACCESSION AR560105  
 VERSION AR560105.1 GI:53970472  
 KEYWORDS  
 SOURCE Unknown.  
 ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
 Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
 thereof

JOURNAL Patent: US 6753163-A 23 22-JUN-2004,  
 FEATURES Location/Qualifiers  
 - source 1. 1380  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560105 ..

Alignment segment 1/1: (+)

Matching length:	20	Total length:	37.6
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHtAGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
   |||||
82 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGGCTGGGGGGGCCCC 131
   |||||
38 oLeuGlyLeu 41
   |||||
132 CCTGGGGCTG 141

```

Sequence name: rgep2ndb:AR560109

Sequence documentation:

LOCUS AR560109 1380 bp DNA linear PAT 08-OCT-2004  
 DEFINITION Sequence 31 from patent US 6753163.  
 ACCESSION AR560109  
 VERSION AR560109.1 GI:53970476  
 KEYWORDS  
 SOURCE Unknown.  
 ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1380)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
 Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
 thereof

JOURNAL Patent: US 6753163-A 31 22-JUN-2004;  
 Location/Qualifiers

FEATURES

source 1. 1380  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560109 ..

Alignment segment 1/1: (+)

Matching length:	20	Total length:	37.6
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHtAGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
   |||||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGGCTGGGGGGGCCCC 113
   |||||
38 oLeuGlyLeu 41
   |||||
114 CCTGGGGCTG 123

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Sequence name: rgep2ndb:AX105405

Sequence documentation:

LOCUS AX105405 1380 bp DNA linear PAT 30-APR-2001  
 DEFINITION Sequence 23 from Patent WO0123533.

ACCESSION AX105405  
VERSION AX105405.1 GI:13921521

KEYWORDS  
SOURCE Homo sapiens (human)

ORGANISM  
Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE  
1 Gurney, M. and Bienkowski, M.J.  
Alzheimer's disease secretase, app substrates therefor, and uses therefor

JOURNAL  
Patent: WO 0123533-A 23 05-APR-2001;  
Pharmacia & Upjohn Company (US)

FEATURES  
source  
1. .1380  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105405 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||
82 ACCGACGACGCGATCCGGCTCCCTGCGCAGCGCGCTGGGGGGGCCCC 131
|||
38 OLeuGlyLeu
|||
132 CCGGGGGGCTG
|||
141

```

Sequence name: rgep2ndb:AX105413

Sequence documentation:

LOCUS AX105413 1380 bp DNA linear PAT 30-APR-2001

DEFINITION Sequence 31 from Patent WO0123533.

ACCESSION AX105413

VERSION AX105413.1 GI:13921525

KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE Gurney, M. and Bienkowski, M.J.

AUTHORS Alzheimer's disease secretase, app substrates therefor, and uses therefor

JOURNAL Patent: WO 0123533-A 31 05-APR-2001;  
Pharmacia & Upjohn Company (US)

FEATURES  
source  
1. .1380  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105413 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

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22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||
64 ACCGACGACGCGATCCGGCTCCCTGCGCAGCGCGCTGGGGGGGCCCC 113
|||
38 OLeuGlyLeu
|||
114 CCGGGGGGCTG
|||
123

```

Sequence name: rgep2ndb:AX573843

Sequence documentation:

LOCUS AX573843 1380 bp DNA linear PAT 07-JAN-2003

DEFINITION Sequence 23 from Patent EP1249498.

ACCESSION AX573843

VERSION AX573843.1 GI:27551487

KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE Gurney, M. and Bienkowski, M.J.

AUTHORS Alzheimer's disease secretase, app substrates therefor, and uses therefor

JOURNAL Patent: EP 1249498-A 23 16-OCT-2002;  
Pharmacia & Upjohn Company (US)

FEATURES  
source  
1. .1380  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573843 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||
82 ACCGACGACGCGATCCGGCTCCCTGCGCAGCGCGCTGGGGGGGCCCC 131
|||
38 OLeuGlyLeu
|||
132 CCGGGGGGCTG
|||
141

```

Sequence name: rgep2ndb:AX573851

Sequence documentation:

LOCUS AX573851 1380 bp DNA linear PAT 07-JAN-2003

DEFINITION Sequence 31 from Patent EP1249498.

ACCESSION AX573851

VERSION AX573851.1 GI:27551491

KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE Gurney, M. and Bienkowski, M.J.

AUTHORS Alzheimer's disease secretase, app substrates therefor, and uses therefor

JOURNAL Patent: EP 1249498-A 31 16-OCT-2002;  
Pharmacia & Upjohn Company (US)

FEATURES  
Location/Qualifiers

source

1. 1380  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573851 ..

Alignment segment 1/1: (+)

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Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGCTGGGGGGGCCCC 113  
38 OleuGlyLeu  
|||||  
114 CCGGGGGCTG 123

Sequence name: rgep2ndb:CQ772952

Sequence documentation:

LOCUS CQ772952 1383 bp DNA linear PAT 04-MAR-2004  
DEFINITION Sequence 17 from Patent WO2004011641.  
ACCESSION CQ772952  
VERSION CQ772952.1 GI:45126412

KEYWORDS

SOURCE

ORGANISM

synthetic construct

synthetic construct

other sequences; artificial sequences.

REFERENCE

1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and

AUTHORS

Shah,A.

TITLE

Crystal structure of beta-site app-cleaving enzyme (bace)

JOURNAL

mutant and uses thereof

PATENT

Patent: WO 2004011641-A 17 05-FEB-2004;

FEATURES

Aster Technology Limited (GB)

Location/Qualifiers

1. 1383

/organism="synthetic construct"

/mol\_type="unassigned DNA"

/db\_xref="taxon:32630"

/note="DNA sequence coding for the BACE N-&gt;Q R57DEL."

Alignment of: us-10-726-967a-1 x CQ772952 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	37.6
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
70 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGCTGGGGGGGCCCC 119  
38 OleuGlyLeu  
|||||  
120 CCGGGGGCTG 129

Sequence name: rgep2ndb:CQ772938

Sequence documentation:

LOCUS CQ772938 1386 bp DNA linear PAT 04-MAR-2004

DEFINITION Sequence 3 from Patent WO2004011641.

ACCESSION CQ772938

VERSION CQ772938.1 GI:45126405

KEYWORDS

SOURCE

ORGANISM

synthetic construct

synthetic construct

other sequences; artificial sequences.

REFERENCE

1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and

AUTHORS

Shah,A.

TITLE

Crystal structure of beta-site app-cleaving enzyme (bace)

JOURNAL

mutant and uses thereof

PATENT

Patent: WO 2004011641-A 3 05-FEB-2004;

FEATURES

Aster technology Limited (GB)

Location/Qualifiers

1. 1386

/organism="synthetic construct"

/mol\_type="unassigned DNA"

/db\_xref="taxon:32630"

/note="DNA sequence coding for the BACE protein, BACE

N-&gt;Q."

Alignment of: us-10-726-967a-1 x CQ772938 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	37.6
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
70 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGCTGGGGGGGCCCC 119  
38 OleuGlyLeu  
|||||  
120 CCGGGGGCTG 129

Sequence name: us-10-726-967a-1 x CQ772946 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 37.6

Matching length: 20 Total length: 20  
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
 Gaps: 0

## Alignment:

```

22 ThrglnHlglylleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
70 ACCCAGCAGCGCATCCGCTGCGCTGCGCAGCGCGCTGGGGGGCGCCCC 119
|||||
38 oleuGlyLeu 41
|||||
120 CCGGGGGCTG 129

```

Sequence name: rgep2ndb:CQ772950

## Sequence documentation:

LOCUS CQ772950 1386 bp DNA linear PAT 04-MAR-2004  
 DEFINITION Sequence 15 from Patent WO2004011641.  
 ACCESSION CQ772950  
 VERSION CQ772950.1 GI:45126411  
 KEYWORDS

SOURCE  
 ORGANISM  
 synthetic construct  
 synthetic construct  
 other sequences; artificial sequences.

## REFERENCE

1 Villard, L.M., Patel, S.J., Yon, J.R., Cleasby, A., Hamilton, B.J. and Shah, A.  
 Crystal structure of beta-site app-cleaving enzyme (bace)  
 mutant used in the development of a new class of Alzheimer's disease  
 Patent: WO 2004011641-A 15 05-FEB-2004;  
 JOURNAL Aetex Technology Limited (GB)

## FEATURES

1..1386  
 location/Qualifiers  
 /organism="synthetic construct"  
 /mol\_type="unassigned DNA"  
 /db\_xref="taxon:32630"  
 /note="DNA sequence coding for the BACE N->Q R57K."

Alignment of: us-10-726-967a-1 x CQ772950 ..

Alignment segment 1/1: (+)

Matching length: 104.00 Total length: 37.6  
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
 Gaps: 0

## Alignment:

```

22 ThrglnHlglylleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
70 ACCCAGCAGCGCATCCGCTGCGCTGCGCAGCGCGCTGGGGGGCGCCCC 119
|||||
38 oleuGlyLeu 41
|||||
120 CCGGGGGCTG 129

```

Sequence name: rgep2ndb:AB050437

## Sequence documentation:

LOCUS AB050437 1408 bp mRNA linear PRI 17-JUL-2001  
 DEFINITION Homo sapiens BACE mRNA for beta-site APP cleaving enzyme I-457,  
 complete cds.  
 ACCESSION AB050437  
 VERSION AB050437.1 GI:13568408  
 KEYWORDS

SOURCE  
 ORGANISM  
 Homo sapiens (human)  
 Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Primates; Catarrhini; Homidae; Homo.

## REFERENCE

1 Tanahashi, H. and Tabira, T.  
 Three novel alternatively spliced isoforms of the human beta-site  
 amyloid precursor protein cleaving enzyme (BACE) and their effect  
 on amyloid beta-peptide production  
 Neurosci. Lett. 307 (1), 9-12 (2001)

## JOURNAL

MEDLINE  
 PUBMED  
 2 (bases 1 to 1408)  
 Tanahashi, H.

## REFERENCE

Submitted (21-OCT-2000) Hiroshi Tanahashi, National Institute of  
 Neuroscience, Division of Demyelinating Disease and Aging; 4-1-1,  
 Ogawaigashi, Kodaira, Tokyo 187-8551, Japan  
 (E-mail: tanahash@ncmp.go.jp, Tel: 81423412711 (ex. 5163),  
 Fax: 81423461747)

## FEATURES

1..1408  
 Location/Qualifiers  
 /organism="Homo sapiens"  
 /mol\_type="mRNA"  
 /db\_xref="taxon:9606"  
 /cfeature\_type="Brain"  
 1..1408  
 /gene="BACE"  
 4..1377  
 /gene="BACE"  
 /note="alternative splicing isoform"  
 /codon\_start=1  
 /product="Beta-site APP cleaving enzyme I-457"  
 /protein\_id="BAB40932.1"  
 /db\_xref="GI:13568409"

## CDS

RETDERPREPRGRGSPFEMVDNRKSGQGYIVETGVSPPQTNILVDTSSNPVAG  
 AAHPFLRRITVQKQSLSTYRDLRGVVVPTQKMEBSLGTDLDPDSLEPFDSLIVKQ  
 THVPLFSLDLCGAGFPLNOSVLAIVGSGSMIGIDHSLYTGSLMTYPIRREYVEY  
 IIVRVINGODLMDCKEYNDKSIIVSGTNNLRLPKKVFPAAYSIKAASSTKSPD  
 GFWLGEOLVQWAGTTPNIPVIVSLVIGERTVOSPRITLIPQOYLRVSDVATSD  
 DCYKFAISOSTGTGMAVMEGPPVVDPRARKTIGFPAVSACHVHDEPRTAAYGPPV  
 TLDWDCGYNIPQIDESTLMTIAYVMAICALPMLPLCLMVCNRCRLRQKHDDPA  
 DDISLTK"

Alignment of: us-10-726-967a-1 x AB050437 ..

Alignment segment 1/1: (+)

Matching length: 104.00 Total length: 37.6  
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
 Gaps: 0

## Alignment:

```

22 ThrglnHlglylleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
67 ACCCAGCAGCGCATCCGCTGCGCTGCGCAGCGCGCTGGGGGGCGCCCC 116
|||||
38 oleuGlyLeu 41
|||||
117 CCGGGGGCTG 126

```

Sequence name: rgep2ndb:AF338816

## Sequence documentation:

LOCUS AF338816 1431 bp mRNA linear PRI 21-MAY-2002  
 DEFINITION Homo sapiens beta-site APP cleaving enzyme type B mRNA, complete  
 cds.  
 ACCESSION AF338816  
 VERSION AF338816.1 GI:13699245  
 KEYWORDS

SOURCE  
 ORGANISM  
 Homo sapiens (human)  
 Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

REFERENCE 1 (bases 1 to 1431)  
AUTHORS Ehebelt,R., Michel,B., De Pietri Tonelli,D., Zacchetti,D., Simons,K., and Keller,P.  
TITLE Splice variants of the beta-site APP-cleaving enzyme BACE1 in human brain and pancreas  
JOURNAL Biochem. Biophys. Res. Commun. 293 (1), 30-37 (2002)  
MEDLINE 22049977  
PUBMED 12054559  
REFERENCE 2 (bases 1 to 1431)  
AUTHORS Michel,B., De Pietri Tonelli,D., Zacchetti,D. and Keller,P.  
TITLE Direct Submission  
JOURNAL Submitted (19-JAN-2001) Max Planck Institute of Molecular Cell Biology and Genetics, Pflzenhauerstr. 108, Dresden D-01307, Germany

## FEATURES

source  
1..1431  
/organism="Homo sapiens"  
/mol\_type="mRNA"  
/db\_xref="taxon:9606"  
/tissue\_type="brain; exocrine pancreas"  
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/note="BACE-1B; potential splice variant of beta-site APP cleaving enzyme (BACE)"  
/codon\_start=1  
/product="beta-site APP cleaving enzyme type B"  
/protein\_id="AAK38374.1"  
/db\_xref="GI:13599246"  
/translation="MAQALPWLIMMGAGVLPAGHTQHGIRLPLRSGLGAPLGLRLP  
RETDEPERBERGRGSFVEMVDNLRGSGQGYVEMTVGSPPTNLIVDTGSSNFAVG  
AAPHPFLHYRQQLSTYDLRKGVVPTQKMEGELDTLVSIPHGNTVVRANI  
AATSDKPFINSNMGILGLAVIARLCGAGPPLNOSVLAASVSGSMIIGIDHS  
LYTGSMTPIRREMYEVITVAVVEINGDILKMDCKEYNDKSIYDSGTNLALPKV  
FEAAVSIRKASSTKRPFGFVLGBOVCQAQTTTWNIFPVISLTMGEVNTQSFRI  
TILPOQYLRVEDVATSDQCYFAISQSGTGMVAGVIMEGFVVDPRKRKIGFAY  
SACHVDEFRITAVEGPFVTLDMEDCGYNIPQDESLMTIAYVMAICALFMLPLCL  
MVCQWRCLRLRQHDHDFADISILK"

## CDS

1..1431  
/note="BACE-1B; potential splice variant of beta-site APP cleaving enzyme (BACE)"  
/codon\_start=1  
/product="beta-site APP cleaving enzyme type B"  
/protein\_id="AAK38374.1"  
/db\_xref="GI:13599246"  
/translation="MAQALPWLIMMGAGVLPAGHTQHGIRLPLRSGLGAPLGLRLP  
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FEAAVSIRKASSTKRPFGFVLGBOVCQAQTTTWNIFPVISLTMGEVNTQSFRI  
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Alignment of: us-10-726-967a-1 x AF338816 ..

Alignment segment 1/1: (+)

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Percent Similarity:	100.00	Matching	Percent Identity:	100.00
Total Percent Similarity:	100.00	Total	Percent Identity:	100.00
Gaps:	0			

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCGACGACGCGATCCGCTGCGCAGCGGCTGGGGGCGCCCC 113  
|||||  
38 OLeuGlyLeu 41  
|||||  
114 CTGGGCGCTG 123

Sequence name: rgep2ndb:AB050436

Sequence documentation:

LOCUS AB050436 1465 bp mRNA linear PRI 17-JUN-2001  
DEFINITION Homo sapiens BACE mRNA for beta-site APP cleaving enzyme I-476,  
complete cde.  
ACCESSION AB050436  
VERSION AB050436.1 GI:13568406  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens

REFERENCE 1  
AUTHORS Tanahashi,H. and Tabira,T.  
TITLE Three novel alternatively spliced isoforms of the human beta-site

amyloid precursor protein cleaving enzyme (BACE) and their effect  
on amyloid beta-peptide production  
JOURNAL Neurosci. Lett. 307 (1), 9-12 (2001)  
MEDLINE 21408467  
PUBMED 11516562  
REFERENCE 2 (bases 1 to 1465)  
AUTHORS Tanahashi,H.  
TITLE Direct Submission  
JOURNAL Submitted (21-OCT-2000) Hiroshi Tanahashi, National Institute of  
Neuroscience, Division of Demyelinating Disease and Aging, 4-1-1,  
Ogawaishashi, Kodaira, Tokyo 187-8551, Japan  
(E-mail:tanahash@cnp.go.jp, Tel:81423412711(ex.5163),  
Fax:81423461747)

## FEATURES

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/mol\_type="mRNA"  
/db\_xref="taxon:9606"  
/tissue\_type="brain"  
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/gene="BACE"  
4..1434  
/gene="BACE"  
/note="alternative splicing isoform"  
/codon\_start=1  
/product="beta-site APP cleaving enzyme I-476"  
/protein\_id="BAB40931.1"  
/db\_xref="GI:13568407"  
/translation="MAQALPWLIMMGAGVLPAGHTQHGIRLPLRSGLGAPLGLRLP  
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AATSDKPFINSNMGILGLAVIARLCGAGPPLNOSVLAASVSGSMIIGIDHS  
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FEAAVSIRKASSTKRPFGFVLGBOVCQAQTTTWNIFPVISLTMGEVNTQSFRI  
TILPOQYLRVEDVATSDQCYFAISQSGTGMVAGVIMEGFVVDPRKRKIGFAY  
SACHVDEFRITAVEGPFVTLDMEDCGYNIPQDESLMTIAYVMAICALFMLPLCL  
MVCQWRCLRLRQHDHDFADISILK"

## gene

## CDS

1..1465  
/note="alternative splicing isoform"  
/codon\_start=1  
/product="beta-site APP cleaving enzyme I-476"  
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/db\_xref="GI:13568407"  
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RETDEPERBERGRGSFVEMVDNLRGSGQGYVEMTVGSPPTNLIVDTGSSNFAVG  
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AATSDKPFINSNMGILGLAVIARLCGAGPPLNOSVLAASVSGSMIIGIDHS  
LYTGSMTPIRREMYEVITVAVVEINGDILKMDCKEYNDKSIYDSGTNLALPKV  
FEAAVSIRKASSTKRPFGFVLGBOVCQAQTTTWNIFPVISLTMGEVNTQSFRI  
TILPOQYLRVEDVATSDQCYFAISQSGTGMVAGVIMEGFVVDPRKRKIGFAY  
SACHVDEFRITAVEGPFVTLDMEDCGYNIPQDESLMTIAYVMAICALFMLPLCL  
MVCQWRCLRLRQHDHDFADISILK"

Alignment of: us-10-726-967a-1 x AB050436 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	37.6
Matching	Length:	20	Total length:	20
Percent Similarity:	100.00	Matching	Percent Identity:	100.00
Total Percent Similarity:	100.00	Total	Percent Identity:	100.00
Gaps:	0			

Alignment:

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|||||  
67 ACCGACGACGCGATCCGCTGCGCAGCGGCTGGGGGCGCCCC 116  
|||||  
38 OLeuGlyLeu 41  
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117 CTGGGCGCTG 126

Sequence name: rgep2ndb:AX700449

Sequence documentation:

LOCUS AX700449 1470 bp DNA linear PAT 03-APR-2003  
DEFINITION Sequence 4 from Patent WO03012089.  
ACCESSION AX700449  
VERSION AX700449.1 GI:29536240  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens

REFERENCE 1  
AUTHORS Yon,J., Cleasby,A., Bruinzeel,W.D., Measure,S.L., Tickle,I. and Sharff,A.

TITLE Crystal structure of beta-site app cleaving enzyme (bace) and use thereof  
JOURNAL Patent: WO 03012089-A 4 13-FEB-2003;  
Astex Technology Limited (GB) ; JANSSEN PHARMACEUTICA N.V. (BE)  
FEATURES  
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1. .1470  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
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Alignment of: us-10-726-967a-1 x AX700449 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

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154 ACCGACGACGGGATCCGGCTGCTGCGCAGCGGCTGGAGAGCTCC 203
38 oLeuGlyLeu
|||||
204 ACTGGGACTG
|||||
213
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Sequence name: rgep2ndb:AR404163

Sequence documentation:

LOCUS AR404163 1503 bp DNA linear PAT 18-DEC-2003  
DEFINITION Sequence 1 from patent US 6627739.  
ACCESSION AR404163  
VERSION AR404163.1 GI:40152203  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1503)  
AUTHORS Anderson,J.P., Baai,G., Doan,M.T., Frigon,N., John,V., Power,M.,  
Sinha,S., Tatsuno,G., Tung,J., Wang,S. and McConlogue,L.  
TITLE beta-secretase enzyme compositions and methods  
JOURNAL Patent: US 6627739-A 1 30-SEP-2003;  
FEATURES  
source  
1. .1503  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR404163 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGGATCCGGCTGCTGCGCAGCGGCTGGAGAGCTCC 113
38 oLeuGlyLeu
|||||
114 CCGGGGCTG
|||||
123
```

Sequence name: rgep2ndb:AX700448

Sequence documentation:

LOCUS AX700448 1506 bp DNA linear PAT 03-APR-2003  
DEFINITION Sequence 3 from Patent WO03012089.  
ACCESSION AX700448  
VERSION AX700448.1 GI:29536239  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

AUTHORS Von,J., Cleasby,A., Bruinzeel,W.D., Masure,S.L., Tickle,I. and  
Smart,A.  
TITLE Crystal structure of beta-site app cleaving enzyme (bace) and use thereof  
JOURNAL Patent: WO 03012089-A 3 13-FEB-2003;  
Astex Technology Limited (GB) ; JANSSEN PHARMACEUTICA N.V. (BE)

FEATURES

source  
1. .1506  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX700448 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGGATCCGGCTGCTGCGCAGCGGCTGGAGAGCTCC 113
38 oLeuGlyLeu
|||||
114 CCGGGGCTG
|||||
123
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Sequence name: rgep2ndb:AX823518

Sequence documentation:

LOCUS AX823518 1506 bp DNA linear PAT 11-DEC-2003  
DEFINITION Sequence 8 from Patent EP1340424.  
ACCESSION AX823518  
VERSION AX823518.1 GI:39749972  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

AUTHORS Jacobsen,H., Mosbach-Ozmen,L. and Melbeck-Hochstetler,P.  
TITLE Double transgenic animal model for alzheimer's disease  
JOURNAL Patent: EP 1340424-A 8 03-SEP-2003;  
F. HOFFMANN-LA ROCHE AG (CH)

FEATURES

source  
1. .1506  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX823518 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.6
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00

Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

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|||||
64 ACCGAGCAGCGGATCCGACTGCCACTGCCAGCGACTGGAGGTGCACC 113
|||||
38 OLeuGlyLeu 41
|||||
114 TCTGGGAGCTG 123
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Sequence name: rgep2ndb:AF204943

## Sequence documentation:

LOCUS AF204943 1506 bp mRNA linear PRI 19-JAN-2000  
DEFINITION Homo sapiens transmembrane aspartic proteinase Asp 2 (BACE1) mRNA,  
complete cds.

ACCESSION AF204943 GI:6715309

VERSION AF204943.1 GI:6715309

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE 1 (bases 1 to 1506)  
Hussein, I., Powell, D., Howlett, D.R., Tew, D.G., Meek, T.D.,  
Chapman, C., Gloger, I.S., Murphy, K.E., Southern, C.D., Ryan, D.M.,  
Smith, T.S., Simmons, D.L., Walsh, F.S., Dingwall, C. and Christie, G.  
Identification of a novel aspartic protease (Asp 2) as  
beta-secretase  
Mol. Cell. Neurosci. 14 (6), 419-427 (1999)

JOURNAL Mol. Cell. Neurosci. 14 (6), 419-427 (1999)

MEDLINE 20030166

PUBMED 10656250

REFERENCE 2 (bases 1 to 1506)  
Powell, D.J., Chapman, C.G. and Murphy, K.

AUTHORS Direct Submission

JOURNAL Submitted (15-NOV-1999) SmithKline Beecham Pharmaceuticals, 709  
Swedeland Rd., King of Prussia, PA 19046, USA

FEATURES Location/Qualifiers

source 1..1506  
/organism="Homo sapiens"  
/mol\_type="mRNA"  
/db\_xref="taxon:9606"  
gene 1..1506  
/gene="BACE1"  
CDS 1..1506  
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/note="beta-site APP processing enzyme"  
/codon\_start=1  
/product="transmembrane aspartic proteinase Asp 2"  
/protein\_id="AF26367.1"  
/db\_xref="GI:6715310"  
/translation="MAQALPMLILMMGAGVLPAGHONGIRLPLASGIGAGPGLPLP  
RENDERPERGRGRGFTVEMDNLKSGSGQSYTYMGSPPTLNLIVDGSNPAVG  
AAHPPLHRYQRQLSTYRDLKRGVVPYQKMGEGELDTLVSIPHGIVVVRANI  
AALTBSDFPINGSNMGILGLVASIARDDSLRPFDSLVKQTHVPLNFSIQCGA  
GFLNDSVLAISVSGSMIGIDHSIYTSLSMTPIRREMYEVIIIVRVEINGQDLKM  
DCKEYVDSIVSGSTTNLRLPKVFEAAVKSIIKASSTKPFDFGLGOLQCMQAG  
TPPWNIPVSIIVSGEVTNOSFRITILLPOQYRVEDVATSDDDCKKPAISOSSTGT  
VMGAVMEGRTYVFPDARKRIGPVAASCHVHDFRIRAAVGPVTVTDMECCGNITPT  
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Alignment of: us-10-726-967a-1 x AF204943 ..

Alignment segment 1/1: (+)

Quality: 104.00      Score: 37.6  
Matching length: 20      Total length: 20  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGGATCCGACTGCCACTGCCAGCGACTGGAGGTGCACC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTTGGGAGCTG 123
```

Sequence name: rgep2ndb:BD103723

## Sequence documentation:

LOCUS BD103723 1527 bp DNA linear PAT 27-AUG-2002  
DEFINITION Beta secretase inhibitor.  
ACCESSION BD103723  
VERSION BD103723.1 GI:22649297  
KEYWORDS WO 0187293-A/6.  
SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE 1 (bases 1 to 1527)  
Miyamoto, M., Matsui, J., Fukumoto, H. and Tarui, N.  
Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.  
Beta secretase inhibitor  
Patent: WO 0187293-A 6 22-NOV-2001.

TAKEDA CHEMICAL INDUSTRIES LTD, MASHOMI MIYAMOTO, JUNJI MATSUI,  
HIROAKI FUKUMOTO, NAOKI TARUI  
COMMENT OS Homo sapiens (human)  
PV WO 0187293-A/6  
PD 22-NOV-2001 WO 2001JP004144  
PF 18-MAY-2001 JP 00P 152758  
PR 19-MAY-2000 JP 00P 152758  
PI MASHOMI MIYAMOTO, JUNJI MATSUI, HIROAKI FUKUMOTO, NAOKI TARUI  
PC A61K31/135,A61K31/14,A61K31/165,A61K31/40,A61K31/4453,A61K31/PC  
4164.

FEATURES Location/Qualifiers

source 1..1527  
/organism="Homo sapiens"  
/mol\_type="genomic DNA"  
/db\_xref="taxon:9606"  
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/organism="Homo sapiens (human)".

Alignment of: us-10-726-967a-1 x BD103723 ..

Alignment segment 1/1: (+)

Quality: 104.00      Score: 37.6  
Matching length: 20      Total length: 20  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

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|||||
64 ACCGAGCAGCGGATCCGACTGCCACTGCCAGCGACTGGAGGTGCACC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTTGGGAGCTG 123
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Sequence name: rgep2ndb:BD235887

## Sequence documentation:

LOCUS BD235887 1977 bp DNA linear PAT 17-JUL-2003  
DEFINITION Alzheimer's disease secretase.

ACCESSION BD235887  
 VERSION BD235887.1 GI:33045657  
 KEYWORDS JP 2002526081-A/3.  
 SOURCE Homo sapiens (human)  
 ORGANISM Homo sapiens  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
 1 (bases 1 to 1977)  
 Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
 Alzheimers disease secretase  
 Patent: JP 2002526081-A 3 20-AUG-2002;  
 PHARMACIA AND UPJOHN CO  
 OS Homo sapiens (human)  
 PN JP 2002526081-A/3  
 PD 20-AUG-2002  
 PE 23-SEP-1999 JP 2000574268  
 PF 24-SEP-1998 US 60/101594  
 PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI  
 HEINRIKSON,  
 PI LUIS A PARODI, RIOTANG YAN  
 PC C12N15/09,A61K45/00,A61P25/28,C07K14/47,C07K16/18,C12N1/15, PC  
 C12N1/19,  
 PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/ 15,  
 PC G01N33/50//C12N1/21,C12R1:19,C12N15/00,C12N5/00 CC  
 Alzheimers disease secretase  
 PH key Location/Qualifiers  
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 /mol\_type="genomic DNA"  
 /db\_xref="taxon:9606"

FEATURES  
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 /db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235887 ..  
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Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:  
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 64 ACCGACGACGGCATCCGGCTGCCCTGCCGACGGCGCTGGGGGGCGCCCC 113  
 38 OLeuGlyLeu  
 114 CCGGGGGCTG 123

Sequence name: rgep2ndb:AR224094

Sequence documentation:  
 LOCUS AR224094 1977 bp DNA linear PAT 26-SEP-2002  
 DEFINITION Sequence 5 from patent US 6440698.  
 ACCESSION AR224094  
 VERSION AR224094.1 GI:23332754  
 KEYWORDS  
 SOURCE Unknown.  
 ORGANISM Unknown.  
 Unclassified.  
 1 (bases 1 to 1977)  
 Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
 Alzheimers disease secretase, APP substrates therefor, and uses therefor

JOURNAL Patent: US 6440698-A 5 27-AUG-2002;  
 FEATURES Location/Qualifiers  
 source 1..1977  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224094 ..  
 Alignment segment 1/1: (+)  

Matching length:	104.00	Score:	37.9
Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:  
 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38  
 64 ACCGACGACGGCATCCGGCTGCCCTGCCGACGGCGCTGGGGGGCGCCCC 113  
 38 OLeuGlyLeu  
 114 CCGGGGGCTG 123

Sequence name: rgep2ndb:AR478779

Sequence documentation:  
 LOCUS AR478779 1977 bp DNA linear PAT 14-MAY-2004  
 DEFINITION Sequence 5 from patent US 6699671.  
 ACCESSION AR478779

Alignment of: us-10-726-967a-1 x AR269225 ..  
 Alignment segment 1/1: (+)  

Matching length:	104.00	Score:	37.9
Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:  
 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38  
 64 ACCGACGACGGCATCCGGCTGCCCTGCCGACGGCGCTGGGGGGCGCCCC 113  
 38 OLeuGlyLeu  
 114 CCGGGGGCTG 123

Sequence name: rgep2ndb:AR478779

Sequence documentation:  
 LOCUS AR478779 1977 bp DNA linear PAT 14-MAY-2004  
 DEFINITION Sequence 5 from patent US 6699671.  
 ACCESSION AR478779



VERSION AR478779.1 GI:47237499  
KEYWORDS  
SOURCE Unknown.  
ORGANISM

REFERENCE 1 (bases 1 to 1977)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
JOURNAL Patent: US 6699671-A 5 02-MAR-2004;  
FEATURES Location/Qualifiers  
source 1..1977  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478779 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Escore:	37.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

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|||||
64 ACCGACGACGGCATCGGCTGCCCTGGCGACGGCGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCGGGGCGCTG 123
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Sequence name: rgep2ndb:AR487346

Sequence documentation:

LOCUS AR487346 1977 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 5 from patent US 6706485.  
ACCESSION AR487346  
VERSION AR487346.1 GI:47252444

KEYWORDS  
SOURCE Unknown.  
ORGANISM

REFERENCE 1 (bases 1 to 1977)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Method of identifying agents that inhibit APP processing activity  
JOURNAL Patent: US 6706485-A 5 16-MAR-2004;  
FEATURES Location/Qualifiers  
source 1..1977  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487346 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Escore:	37.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
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|||||
64 ACCGACGACGGCATCGGCTGCCCTGGCGACGGCGCTGGGGGGCCCC 113
```

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38 OLeuGlyLeu 41
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rgep2ndb:AR531985

Sequence documentation:

LOCUS AR531985 1977 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 5 from patent US 6727074.  
ACCESSION AR531985  
VERSION AR531985.1 GI:53920519

KEYWORDS  
SOURCE Unknown.  
ORGANISM

REFERENCE 1 (bases 1 to 1977)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
JOURNAL Patent: US 6727074-A 5 27-APR-2004;  
FEATURES Location/Qualifiers  
source 1..1977  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531985 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Escore:	37.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCGGCTGCCCTGGCGACGGCGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rgep2ndb:AR540887

Sequence documentation:

LOCUS AR540887 1977 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 5 from patent US 6737510.  
ACCESSION AR540887  
VERSION AR540887.1 GI:53932400

KEYWORDS  
SOURCE Unknown.  
ORGANISM

REFERENCE 1 (bases 1 to 1977)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
JOURNAL Patent: US 6737510-A 5 18-MAY-2004;  
FEATURES Location/Qualifiers  
source 1..1977  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540887 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Escore:	37.9
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Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGAGCAGCGCATCCGGCTGCCCTGGCAGCGGCTGGGGGGGCGCCCC 113  
|||||  
38 OLeuGlyLeu 41  
|||||  
114 CTGGGGGCTG 123

Sequence name: rgep2ndb:AR560096

Sequence documentation:

LOCUS AR560096 1977 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 5 from patent US 6753163.  
ACCESSION AR560096  
VERSION AR560096.1 GI:53970463

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

TITLE

JOURNAL

FEATURES

source

Alignment of: us-10-726-967a-1 x AR560096 ..

Alignment segment 1/1: (+)  
Matching length: 104.00 Total length: 37.9  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGAGCAGCGCATCCGGCTGCCCTGGCAGCGGCTGGGGGGGCGCCCC 113  
|||||  
38 OLeuGlyLeu 41  
|||||  
114 CTGGGGGCTG 123

Sequence name: rgep2ndb:AX105387

Sequence documentation:

LOCUS AX105387 1977 bp DNA linear PAT 30-APR-2001  
DEFINITION Sequence 5 from Patent WO0123533.  
ACCESSION AX105387  
VERSION AX105387.1 GI:13921512

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

TITLE

JOURNAL Patent: WO 0123533-A 5 05-APR-2001;  
Pharmacia & Upjohn Company (US)  
FEATURES Location/Qualifiers  
source 1..1977  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105387 ..

Alignment segment 1/1: (+)  
Matching length: 104.00 Total length: 37.9  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGAGCAGCGCATCCGGCTGCCCTGGCAGCGGCTGGGGGGGCGCCCC 113  
|||||  
38 OLeuGlyLeu 41  
|||||  
114 CTGGGGGCTG 123

Sequence name: rgep2ndb:AX378017

Sequence documentation:

LOCUS AX378017 1977 bp DNA linear PAT 18-MAR-2002  
DEFINITION Sequence 3 from Patent WO0206306.  
ACCESSION AX378017  
VERSION AX378017.1 GI:19574051

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

TITLE

JOURNAL

FEATURES

source

Alignment of: us-10-726-967a-1 x AX378017 ..

Alignment segment 1/1: (+)  
Matching length: 104.00 Total length: 37.9  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGAGCAGCGCATCCGGCTGCCCTGGCAGCGGCTGGGGGGGCGCCCC 113  
|||||  
38 OLeuGlyLeu 41  
|||||  
114 CTGGGGGCTG 123

Sequence name: rgep2ndb:AX573825

Sequence documentation:  
LOCUS AX573825 1977 bp DNA linear PAT 07-JAN-2003  
DEFINITION Sequence 5 from Patent EP1249498.  
ACCESSION AX573825  
VERSION AX573825.1 GI:27551478  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
REFERENCE  
1 Gurney, M. and Bienkowski, M.J.  
Alzheimer's disease secretase, app substrates therefor, and uses  
therefor  
Patent: EP 1249498-A 5 16-OCT-2002;  
JOURNAL PHARMACIA & UPJOHN COMPANY (US)  
FEATURES  
source 1. 1977  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573825 ..  
Alignment segment 1/1: (+)  
Matching length: 104.00 Score: 37.9  
Percent Similarity: 20 Total length: 20  
Total Percent Identity: 100.00  
Gaps: 0

Alignment:  
22 ThrGnHtSGlYtLeAArgLeuProLeuAArgSerGtYleuGtYAlAPr 38  
|||||  
64 ACCGACGAGGATCGGCTGCGCTGCGACGCGCTGCGGCGGCGCC 113  
|||||  
38 OLeuGtYleu 41  
|||||  
114 CTTGGGCGCTG 123

Sequence name: rgep2ndb:BD235886  
Sequence documentation:  
LOCUS BD235886 2070 bp DNA linear PAT 17-JUL-2003  
DEFINITION Alzheimer's disease secretase.  
ACCESSION BD235886  
VERSION BD235886.1 GI:33045656  
KEYWORDS JP 2002526081-A/2.  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
REFERENCE  
1 (bases 1 to 2070)  
Gurney, M.E., Bienkowski, M.J., Heinrichson, R.L., Parodi, L.A. and  
Yan, R.  
Alzheimer's disease secretase  
Patent: JP 2002526081-A 2 20-AUG-2002;  
JOURNAL PHARMACIA AND UPJOHN CO  
FEATURES  
source OS Homo sapiens (human)  
PN JP 2002526081-A/2  
PD 20-AUG-2002  
PR 23-SEP-1999 JP 2000574268  
PT 24-SEP-1998 US 60/101594  
PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI  
HEINRICHSON, PARODI, RIQIANG YAN  
PC C12N1/5, A61K45/00, A61P25/28, C07K14/47, C07K16/18, C12N1/15, PC  
C12N1/19, PC  
C12N1/21, C12N5/10, C12N9/64, C12P21/02, C12P21/08, C12Q1/37, G01N33/ PC

15, G01N33/50//C12N1/21, C12R1/19, C12N15/00, C12N5/00 CC  
PC Alzheimer's disease secretase  
FR Key Location/Qualifiers  
FT source 1. .2070  
/organism="Homo sapiens (human)".  
FEATURES  
source 1. .2070  
/organism="Homo sapiens"  
/mol\_type="genomic DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235886 ..  
Alignment segment 1/1: (+)  
Matching length: 104.00 Score: 37.9  
Percent Similarity: 20 Total length: 20  
Total Percent Identity: 100.00  
Gaps: 0

Alignment:  
22 ThrGnHtSGlYtLeAArgLeuProLeuAArgSerGtYleuGtYAlAPr 38  
|||||  
64 ACCGACGAGGATCGGCTGCGCTGCGACGCGCTGCGGCGGCGCC 113  
|||||  
38 OLeuGtYleu 41  
|||||  
114 CTTGGGCGCTG 123

Sequence name: rgep2ndb:AR224093  
Sequence documentation:  
LOCUS AR224093 2070 bp DNA linear PAT 26-SEP-2002  
DEFINITION Sequence 3 from patent US 6440698.  
ACCESSION AR224093  
VERSION AR224093.1 GI:23332753  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE  
1 (bases 1 to 2070)  
Gurney, M.E., Bienkowski, M.J., Heinrichson, R.L., Parodi, L.A. and  
Yan, R.  
Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
Patent: US 6440698-A 3 27-AUG-2002;  
JOURNAL Location/Qualifiers  
FEATURES  
source 1. .2070  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224093 ..  
Alignment segment 1/1: (+)  
Matching length: 104.00 Score: 37.9  
Percent Similarity: 20 Total length: 20  
Total Percent Identity: 100.00  
Gaps: 0

Alignment:  
22 ThrGnHtSGlYtLeAArgLeuProLeuAArgSerGtYleuGtYAlAPr 38  
|||||  
64 ACCGACGAGGATCGGCTGCGCTGCGACGCGCTGCGGCGGCGCC 113  
|||||  
38 OLeuGtYleu 41  
|||||  
114 CTTGGGCGCTG 123

Sequence name: rgep2ndb:AR269224

Sequence documentation:  
LOCUS AR269224 2070 bp DNA linear PAT 10-APR-2003  
DEFINITION Sequence 3 from patent US 6500667.  
ACCESSION AR269224  
VERSION AR269224.1 GI:29700192  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 2070)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.  
TITLE Apateryl protease 2 (aspr2) antisense oligonucleotides  
JOURNAL Patent: US 6500667-A 3 31-DEC-2002;  
FEATURES  
source Location/Qualifiers  
1..2070  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269224 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Total length:	Score: 37.9
Matching Percent Similarity:	100.00	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyTLeaArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGCATCCGGCTGCCCTGCGCACGCGGCTGGGGGGCGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rgep2ndb:AR478778

Sequence documentation:  
LOCUS AR478778 2070 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 3 from patent US 6699671.  
ACCESSION AR478778  
VERSION AR478778.1 GI:47237498  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 2070)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6699671-A 3 02-MAR-2004;  
FEATURES  
source Location/Qualifiers  
1..2070  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478778 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Total length:	Score: 37.9
Matching Percent Similarity:	100.00	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyTLeaArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGCATCCGGCTGCCCTGCGCACGCGGCTGGGGGGCGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rgep2ndb:AR487345

Sequence documentation:  
LOCUS AR487345 2070 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 3 from patent US 6706485.  
ACCESSION AR487345  
VERSION AR487345.1 GI:47252443  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 2070)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.  
TITLE Method of identifying agents that inhibit APP processing activity  
JOURNAL Patent: US 6706485-A 3 16-MAR-2004;  
FEATURES  
source Location/Qualifiers  
1..2070  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487345 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Total length:	Score: 37.9
Matching Percent Similarity:	100.00	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyTLeaArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGCATCCGGCTGCCCTGCGCACGCGGCTGGGGGGCGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rgep2ndb:AR531984

Sequence documentation:  
LOCUS AR531984 2070 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 3 from patent US 6727074.  
ACCESSION AR531984  
VERSION AR531984.1 GI:53920518  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 2070)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6727074-A 3 27-APR-2004;  
FEATURES  
source Location/Qualifiers  
1..2070  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531984 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CCTGGGGCTG
|||||
123
```

Sequence name: rgep2ndb:AR540886

Sequence documentation:

LOCUS AR540886 2070 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 3 from patent US 6737510.  
ACCESSION AR540886  
VERSION AR540886.1 GI:53932399  
KEYWORDS  
SOURCE  
ORGANISM Unknown.  
Unclassified.

REFERENCE 1 (bases 1 to 2070)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
thereof  
JOURNAL Patent: US 6737510-A 3 18-MAY-2004;  
FEATURES  
source Location/Qualifiers  
1..2070  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540886 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CCTGGGGCTG
|||||
123
```

Sequence name: rgep2ndb:AR560095

Sequence documentation:

LOCUS AR560095 2070 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 3 from patent US 6753163.  
ACCESSION AR560095  
VERSION AR560095.1 GI:53970462  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.

Unclassified.

REFERENCE 1 (bases 1 to 2070)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
thereof  
JOURNAL Patent: US 6753163-A 3 22-JUN-2004;  
FEATURES  
source Location/Qualifiers  
1..2070  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560095 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu
|||||
114 CCTGGGGCTG
|||||
123
```

Sequence name: rgep2ndb:AX105385

Sequence documentation:

LOCUS AX105385 2070 bp DNA linear PAT 30-APR-2001  
DEFINITION Sequence 3 from Patent WO0123533.  
ACCESSION AX105385  
VERSION AX105385.1 GI:13921511  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1  
AUTHORS Gurney,M. and Bienkowski,M.J.  
TITLE Alzheimer's disease secretase, app substrates therefor, and uses  
thereof  
JOURNAL Patent: WO 0123533-A 3 05-APR-2001;  
FEATURES  
source Location/Qualifiers  
1..2070  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105385 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu
|||||
41
```

|||||  
114 CCTGGGGCTG

123

Sequence name: rgep2ndb:AX378015

Sequence documentation:

LOCUS AX378015 2070 bp DNA linear PAT 18-MAR-2002  
DEFINITION Sequence 1 from Patent WO0206306.

ACCESSION AX378015

VERSION AX378015.1 GI:19574050

KEYWORDS

SOURCE Homo sapiens (human)

REFERENCE 1 Mammalia; Eutheria; Chordata; Craniata; Vertebrata; Euteleostomi;  
Eukaryota; Metazoa; Primates; Catarrhini; Homnidae; Homo.AUTHORS Yan, R., Tomasek, J. A. G., Gurney, M. E., Emmons, T. L., Bienkowski, M. J.  
and Heintz, R. L.  
Substrates and assays for -g(b)-secretase activity  
Patent: WO 0206306-A 1 24-JAN-2002;JOURNAL PHARMACIA & UPJOHN COMPANY (US)  
FEATURES location/Qualifiers

source

1. 2070  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX378015 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 37.9  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValApr 38  
64 ACCGAGCAGCGCATCCGGCTCCCTGCGCAGCGGCTGGGGGGCGCCCC 113  
38 oLeuGlyLeu 41  
|||||  
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AX573823

Sequence documentation:

LOCUS AX573823 2070 bp DNA linear PAT 07-JAN-2003  
DEFINITION Sequence 3 from Patent EPI249498.

ACCESSION AX573823

VERSION AX573823.1 GI:27551477

KEYWORDS

SOURCE Homo sapiens (human)

REFERENCE 1 Mammalia; Eutheria; Chordata; Craniata; Vertebrata; Euteleostomi;  
Eukaryota; Metazoa; Primates; Catarrhini; Homnidae; Homo.AUTHORS Gurney, M. and Bienkowski, M. J.  
Alzheimer's disease secretase, app substrates therefor, and uses  
therefor  
Patent: EP 1249498-A 3 16-OCT-2002;JOURNAL PHARMACIA & UPJOHN COMPANY (US)  
FEATURES location/Qualifiers

source

1. 2070  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573823 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 37.9  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValApr 38  
64 ACCGAGCAGCGCATCCGGCTCCCTGCGCAGCGGCTGGGGGGCGCCCC 113  
38 oLeuGlyLeu 41  
|||||  
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AX700447

Sequence documentation:

LOCUS AX700447 2070 bp DNA linear PAT 03-APR-2003  
DEFINITION Sequence 2 from Patent WO03012089.

ACCESSION AX700447

VERSION AX700447.1 GI:29536238

KEYWORDS

SOURCE Homo sapiens (human)

REFERENCE 1 Mammalia; Eutheria; Chordata; Craniata; Vertebrata; Euteleostomi;  
Eukaryota; Metazoa; Primates; Catarrhini; Homnidae; Homo.AUTHORS Von, J., Cleasby, A., Bruinzeel, W. D., Masure, S. L., Tickle, I. and  
Shariff, A.  
Crystal structure of beta-site app cleaving enzyme (bace) and use  
thereof  
Patent: WO 03012089-A 2 13-FEB-2003;JOURNAL Astex Technology Limited (GB) ; JANSSEN PHARMACEUTICA N.V. (BE)  
FEATURES location/Qualifiers

source

1. 2070  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX700447 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 37.9  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValApr 38  
64 ACCGAGCAGCGCATCCGGCTCCCTGCGCAGCGGCTGGGGGGCGCCCC 113  
38 oLeuGlyLeu 41  
|||||  
114 CCTGGGGGCTG 123

Sequence name: rgep2ndb:AF200343

Sequence documentation:

LOCUS AF200343 2070 bp mRNA linear PRI 12-DEC-1999  
DEFINITION Homo sapiens chromosome 11 aspartyl protease 2 mRNA, complete cds.

ACCESSION AF200343

VERSION AF200343.1 GI:6561813

KEYWORDS

SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens

**REFERENCE**  
**AUTHORS**  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
 1 (bases 1 to 2070)  
 Yan, R., Bienkowski, M.J., Shuck, M.E., Miao, H., Torry, M.C., Pauley, A.M., Brashears, J.R., Strattan, N.C., Maches, W.R., Buhl, A.E., Carter, D.B., Tomasselli, A.G., Parodi, L.A., Heinrichson, R.L. and Gurney, M.E.  
**TITLE**  
 Membrane-anchored aspartyl protease with Alzheimer's disease  
**JOURNAL**  
 Nature 402 (6761), 533-537 (1999)  
**MEDLINE**  
 20057170  
**PUBMED**  
 10591213  
**REFERENCE**  
 2 (bases 1 to 2070)  
 Bienkowski, M.J., Shuck, M.E., Slightom, J.L. and Drong, R.F.  
**AUTHORS**  
 Direct Submission  
 Submitted (29-OCT-1999) Genomics Research, PharmaciaUpjohn, 301 Henrietta, Kalamazoo, MI 49007, USA  
**JOURNAL**  
 Location/Qualifiers  
**FEATURES**  
 source  
 1. 2070  
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 1. 1506  
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 /db\_xref="GI:6561814"  
 /translation="MAQALPMLLMGAGVLPANHTGHTGRLPLRSGLGAPGLRLP  
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 GFLPNOSEVLASVGGSMIGIDHSILVTSGLMTPIRREYEVIVRAVEINQDLAK  
 DCEYNDKSIIVDSGTNLRPKKVFPAVAKSKLASSTKFPDGFMLGSLQCMQNG  
 TTPWNIPEVSLVMEGVNTSPRITLIPQOYLRPDVATVSODCKYKFAISOSTGT  
 VMAGVMEGYPVVPDRARKRIPFAVSACHVDFERTPAVSGPFTLLMEQCGNIPT  
 DESTMTIAIVMAICLPMPLPCLMTVCNRCLRCRLRQNDPRADISLAK"  
**Alignment of:** us-10-726-967a-1 x AF200343 ..  
**Alignment segment 1/1: (+)**  

	Quality:	104.00	Score:	37.9
Matching Length:	20	Total Length:	20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

**Alignment:**  
 22 ThrGlnHsgIYlEArgLeuProLeuAArgserGIyLeuGIyAlaAaPr 38  
 64 ACCGACGACGGCATCGGCTGCCCTGGCGACGGCTGGGGGGGGCCCC 113  
 38 CLeuClYleu 41  
 114 CCTGGGGCGCTG 123  
**Sequence name:** rgep2ndb:BC036084  
**Sequence documentation:**  
 LOCUS BC036084 2174 bp mRNA linear PRI 30-JUN-2004  
 DEFINITION Homo sapiens beta-site APP-cleaving enzyme 1, transcript variant a,  
 mRNA (cDNA clone MGC:33762 IMAGR:5311572), complete cds.  
 ACCESSION BC036084  
 VERSION BC036084.1 GI:23273578  
 KEYWORDS MGC.  
 SOURCE Homo sapiens (human)  
 ORGANISM Homo sapiens  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
**REFERENCE**  
 1 (bases 1 to 2174)

**AUTHORS**  
 Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F., Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L., Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L., Schaeetz, T.E., Brownstein, M.J., Ueda, T.B., Toshiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loggellano, N.A., Peters, G.J., Abramson, R.D., Mulian, S.J., Bosak, S.A., McEwen, P.J., McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., Morley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hui, X., Gibbs, R.A., Viallon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Kettleman, M., Madan, A., Rodriguez, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shcherchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smalios, D.E., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.  
 Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences  
 Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)  
 12477932  
 2 (bases 1 to 2174)  
 Strausberg, R.  
**REFERENCE**  
 Direct Submission  
 Submitted (31-JUN-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA  
**JOURNAL**  
 Location/Qualifiers  
**FEATURES**  
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 /lab\_host="DH10B"  
 /note="Vector: pBluescript"  
 1. 2174  
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 457. 1962  
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 DCEYNDKSIIVDSGTNLRPKKVFPAVAKSKLASSTKFPDGFMLGSLQCMQNG  
 TTPWNIPEVSLVMEGVNTSPRITLIPQOYLRPDVATVSODCKYKFAISOSTGT  
 VMAGVMEGYPVVPDRARKRIPFAVSACHVDFERTPAVSGPFTLLMEQCGNIPT  
 DESTMTIAIVMAICLPMPLPCLMTVCNRCLRCRLRQNDPRADISLAK"  
**REMARK**  
 COMMENT  
 Email: gcbp-remail.nih.gov  
 Tissue Procurement: Miklos Palkovits, M.D., Ph.D.  
 cDNA Library Preparation: Michael J. Brownstein (NHGRI) & Shiraki Toshitaki and Piero Carninci (RIKEN)  
 DNA Library Arrayed by: The I.M.A.G.E. Consortium (LNL)  
 DNA Sequencing by: Sequencing Group at the Stanford Human Genome Center, Stanford University School of Medicine, Stanford, CA 94305  
 Web site: http://www.bngc.stanford.edu  
 Contact: (Dickson, Mark) mcd@paxil.stanford.edu  
 Dickson, M., Schmutz, J., Grimwood, J., Rodriguez, A., and Myers, R. M.  
 Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LNL at: http://image.llnl.gov  
 Series: IRAP Plate: 48 Row: p Column: 18  
 This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 21040369.  
**FEATURES**  
 location/Qualifiers  
 1. 2174  
 /organism="Homo sapiens"  
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 /cissue type="Brain, hypothalamus"  
 /clone\_1ib="NIH MGC\_96"  
 /lab\_host="DH10B"  
 /note="Vector: pBluescript"  
 1. 2174  
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 /note="synonyms: ASP2, HSPC104, KIAA1149, BACE"  
 /db\_xref="locusid:23621"  
 /db\_xref="MIM:604252"  
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 DCEYNDKSIIVDSGTNLRPKKVFPAVAKSKLASSTKFPDGFMLGSLQCMQNG  
 TTPWNIPEVSLVMEGVNTSPRITLIPQOYLRPDVATVSODCKYKFAISOSTGT  
 VMAGVMEGYPVVPDRARKRIPFAVSACHVDFERTPAVSGPFTLLMEQCGNIPT  
 DESTMTIAIVMAICLPMPLPCLMTVCNRCLRCRLRQNDPRADISLAK"

RETDPEERGRSGFVEMUNDLRKSGGQYVEMYGSPPQNTIIVDNGSSPANG  
AAPRFLHRYQROLPSTYRDLRKGVYVPTQGMBSGLDVLSPHGPVVRANT  
AATIESDKFPLNGSNWEGTGLAYAEIARPDLSLPPFDSLKQTHVNLPSIQLCGA  
GFPLNQBSEVLASVSGSMIGIDHSLYGTSLMYPIRREWEYEVIVREINQDLKM  
DCKEYNQKSLVDSGTTNLRPLPKVPEAAVSGIKAASSTKFPDGFGLQVCMQMG  
TTPNNIPVLSILYMGVNTNSFRITLIPQYLRPVDVATSOODCYKFAISOSTGT  
VMGAVMEGFVYVDFBARKRGFAVASCHEIDERTAAVSGPFTLDMEOCGNIIPT  
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Alignment of: us-10-726-967a-1 x BC036084 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	37.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
530 ACCGACGACGGCATCCGCGCTGCCCTGCGACGCGCTGGGGGGCCCC 569  
|||||  
38 OLeuGlyLeu 41  
|||||  
570 CCTGGGGCTG 579

Sequence name: rgep2ndb:AR404203

Sequence documentation: 2348 bp DNA linear PAT 18-DEC-2003  
LOCUS AR404203  
DEFINITION Sequence 42 from patent US 6627739.  
ACCESSION AR404203  
VERSION AR404203.1 GI:40152243  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 2348)  
AUTHORS Anderson,J.P., Baer,G., Doan,M.T., Frigon,N., John,V., Power,M.,  
Sinha,S., Tatsuono,G., Tung,J., Wang,S. and McConlogue,L.  
TITLE .beta.-secretase enzyme compositions and methods  
JOURNAL Patent: US 6627739-A 42 30-SEP-2003;  
FEATURES  
source 1..2348  
Location/Qualifiers  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR404203 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	38
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
369 ACCGACGACGGCATCCGCGCTGCCCTGCGACGCGCTGGGGGGCCCC 418  
|||||  
38 OLeuGlyLeu 41  
|||||  
419 CCTGGGGCTG 428

Sequence name: rgep2ndb:AR404204

Sequence documentation:

LOCUS AR404204 2348 bp DNA linear PAT 18-DEC-2003  
DEFINITION Sequence 44 from patent US 6627739.  
ACCESSION AR404204  
VERSION AR404204.1 GI:40152244  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 2348)  
AUTHORS Anderson,J.P., Baer,G., Doan,M.T., Frigon,N., John,V., Power,M.,  
Sinha,S., Tatsuono,G., Tung,J., Wang,S. and McConlogue,L.  
TITLE .beta.-secretase enzyme compositions and methods  
JOURNAL Patent: US 6627739-A 44 30-SEP-2003;  
FEATURES  
source 1..2348  
Location/Qualifiers  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR404204 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	38
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
369 ACCGACGACGGCATCCGCGCTGCCCTGCGACGCGCTGGGGGGCCCC 418  
|||||  
38 OLeuGlyLeu 41  
|||||  
419 CCTGGGGCTG 428

Sequence name: rgep2ndb:AX700446

Sequence documentation: 2526 bp DNA linear PAT 03-APR-2003  
LOCUS AX700446  
DEFINITION Sequence 1 from Patent WO03012089.  
ACCESSION AX700446  
VERSION AX700446.1 GI:29536237  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
REFERENCE 1  
AUTHORS Yon,J., Cleasby,A., Bruinzeel,W.D., Maure,S.L., Tickle,I. and  
Sharif,A.  
TITLE Crystal structure of beta-site app cleaving enzyme (bace) and use  
thereof  
JOURNAL Patent: WO 03012089-A 1 13-FEB-2003;  
FEATURES  
source 1..2526  
Location/Qualifiers  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
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Alignment of: us-10-726-967a-1 x AX700446 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	38.1
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		



## Alignment:

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517 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGCTGGGGGGGCCCC 566  
38 OLeuGlyLeu 41  
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567 CCTGGGGCTG 576

Sequence name: rgep2ndb:AF190725

## Sequence documentation:

LOCUS AF190725 2526 bp mRNA linear PRI 26-OCT-1999  
DEFINITION Homo sapiens beta-site APP cleaving enzyme (BACE) mRNA, complete  
cd8.  
ACCESSION AF190725  
VERSION AF190725.1 GI:6118538  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM

REFERENCE  
AUTHORS Vassar, R., Bennett, B.D., Babu-Khan, S., Kahn, S., Mendiaz, B.A.,  
Dent, P., Teplow, D.B., Ross, S., Amarante, P., Loeb, R., Luo, Y.,  
Fisher, S., Fuller, J., Edenson, S., Lile, J., Jarosinski, M.A.,  
Biere, A.L., Curran, E., Burgess, T., Louis, J.C., Collins, F.,  
Teanor, J., Rogers, G. and Citron, M.  
Beta-secretase cleavage of Alzheimer's amyloid precursor protein by  
the transmembrane aspartic protease BACE  
Science, 286 (5440), 735-741 (1999)

TITLE  
JOURNAL MEDLINE  
PUBMED 20002972  
10531052  
2 (bases 1 to 2526)  
REFERENCE Bennett, B.D., Vassar, R. and Citron, M.  
AUTHORS Direct Submission  
TITLE Submitted (29-SEP-1999) Neuroscience, Amgen Inc., One Amgen Center  
JOURNAL Dr., Thousand Oaks, CA 91320-1799, USA  
Location/Qualifiers

FEATURES

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/mol\_type="mRNA"  
/db\_xref="taxon:9606"  
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/db\_xref="GI:6118539"

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REIDBERBERGRGSEFVEMVDNLRGSGQGYVETGSPOTLNLIVDSSNFAG  
AAHPPLHRYVORLSTYRDLRGVVPVPTQKMGELGTLVSLPHGNVVRANI  
AATBEDKPRFINSNMEGILGLAYARDDLEPRFDSLYQTVPRNPSLOLGA  
GFLNOSBVLASVGSNTIGIDHSLETSMTPIRKRETVIVIVRINQDLN  
DCEKYNDKSIIVDSGTNLRLPKRVFAAKSIKAASSTKFPDGLGSLQVCSWG  
TTPWNIFFPVLSLIGEVNTQSFRITILPOVYRPVEDVATSDDDCYKFAISOSTGT  
VMGAVIMEGFYVVEDRARKRIGFAVSAHVHDFRPAVGPVTLDMEDCGYNIPT  
DESLMTIAVMAICALFPLPLCLMWCCQRCLRCRQGHDPADDISILK"

Alignment of: us-10-726-967a-1 x AF190725

Alignment segment 1/1: (+)

Quality: 104.00  
Matching length: 20  
Matching Percent: 100.00  
Total length: 38.1  
Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
517 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGCTGGGGGGGCCCC 566  
38 OLeuGlyLeu 41  
|||||  
567 CCTGGGGCTG 576

Sequence name: rgep2ndb:AR178469

## Sequence documentation:

LOCUS AR178469 2541 bp DNA linear PAT 20-APR-2002  
DEFINITION Sequence 1 from patent US 6319689.  
ACCESSION AR178469  
VERSION AR178469.1 GI:20219607  
KEYWORDS  
SOURCE Unknown.  
ORGANISM

REFERENCE  
AUTHORS 1 (bases 1 to 2541)  
Powell, D.J., Chapman, C.G., Murphy, K. and Smith, T.S.  
TITLE ASP2  
JOURNAL Patent: US 6319689-A 1 20-NOV-2001;  
FEATURES Location/Qualifiers  
source 1..2541  
/organism="unknown"  
/mol\_type="unassigned DNA"

Alignment of: us-10-726-967a-1 x AR178469

Alignment segment 1/1: (+)

Quality: 104.00  
Matching length: 20  
Matching Percent: 100.00  
Total length: 38.1  
Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGCTGGGGGGGCCCC 113  
38 OLeuGlyLeu 41  
|||||  
114 CCTGGGGCTG 123

Sequence name: rgep2ndb:ES0816

## Sequence documentation:

LOCUS ES0816 2541 bp DNA linear PAT 18-JUN-2001  
DEFINITION Aspartate proteinase ASP2.  
ACCESSION ES0816  
VERSION ES0816.1 GI:13023199  
KEYWORDS JP 2000060579-A/1.  
SOURCE unidentified  
ORGANISM unidentified  
unclassified.

REFERENCE  
AUTHORS 1 (bases 1 to 2541)  
David, J.P., Conrad, G.C., Kay, M. and Trudy, S.S.  
TITLE Aspartate proteinase ASP2  
JOURNAL Patent: JP 2000060579-A 1 29-FEB-2000;  
COMMENT SWITZERLINE BEECHAM CORP  
OS Unidentified  
PD JP 2000060579-A/1  
PF 03-AUG-1999 JP 1999219665  
PR 28-JAN-1997 GB 9701684.4  
PI DAVID J POWERU, CONRAD G CHAPPMAN, KAY MAFI, TRUDY S SMITH PC  
C12N15/09, A61K31/7088, A61K38/46, A61K39/00, A61K39/395, PC  
A61K39/395, A61K48/00,

PC A61P25/28,A61P35/00,A61P43/00,C07K16/40,C12N1/15,C12N1/19, PC  
C12N1/21,  
PC C12N5/10,C12N9/64,C12Q1/37,G01N33/15,G01N33/50,G01N33/53, PC  
G01N33/566,  
PC G01N33/577//C12P21/08,C12N15/00,A61K37/54,C12N5/00 CC  
Strandedness: Single;  
CC Topology: Linear;  
FH Key 1..2541 Location/Qualifiers  
FT source /organism='Unidentified'.  
Location/Qualifiers  
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Alignment of: us-10-726-967a-1 x B50816 ..

Alignment segment 1/1: (+)

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Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCGGCGGCC 113  
|||||  
38 OLeuGlyLeu 41  
|||||  
114 CTTGGGGGCTG 123

Sequence name: rgep2ndb:AX002655

Sequence documentation:

LOCUS AX002655 2541 bp DNA linear PAT 10-MAR-2000  
DEFINITION Sequence 1 from Patent EP0855444.  
ACCESSION AX002655  
VERSION AX002655.1 GI:7242133

KEYWORDS

SOURCE unidentified  
ORGANISM unidentified

REFERENCE 1 (bases 1 to 2541)

AUTHORS Murphy, K. and Chapman, C.G.

TITLE Aspartic proteinase 2 (ASP2)

JOURNAL Patent: EP 0855444-A 1 29-JUL-1998;  
SMITHKLINE BEECHAM PLC (GB); SMITHKLINE BEECHAM CORP (US)

FEATURES  
source 1..2541  
Location/Qualifiers  
/organism="unidentified"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:32644"

Alignment of: us-10-726-967a-1 x AX002655 ..

Alignment segment 1/1: (+)

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Matching length:	20		Total length:	20
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCGGCGGCC 113  
|||||

38 OLeuGlyLeu 41  
|||||  
114 CTTGGGGGCTG 123

Sequence name: rgep2ndb:AX700452

Sequence documentation:

LOCUS AX700452 2541 bp DNA linear PAT 03-APR-2003  
DEFINITION Sequence 7 from Patent WO03012089.  
ACCESSION AX700452  
VERSION AX700452.1 GI:29536241

KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens (human)  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

AUTHORS Von, J., Cleasby, A., Bruinzeel, W.D., Measure, S.L., Tickle, I. and  
Sharff, A.

TITLE Crystal structure of beta-site app cleaving enzyme (bace) and use  
thereof

JOURNAL Patent: WO 03012089-A 7 13-FEB-2003;  
Astell Technology Limited (GB); JANSSEN PHARMACEUTICA N.V. (BE)

FEATURES

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Location/Qualifiers  
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/mol\_type="unassigned DNA"  
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Alignment of: us-10-726-967a-1 x AX700452 ..

Alignment segment 1/1: (+)

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Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

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64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCGGCGGCC 113  
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38 OLeuGlyLeu 41  
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114 CTTGGGGGCTG 123

Sequence name: rgep2ndb:AR305033

Sequence documentation:

LOCUS AR305033 3252 bp DNA linear PAT 12-JUN-2003  
DEFINITION Sequence 1 from patent US 6545127.  
ACCESSION AR305033  
VERSION AR305033.1 GI:31694263

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.  
Unclassified.

REFERENCE 1 (bases 1 to 3252)

AUTHORS Tang, J. J. N., Lin, X., Koelsch, G. and Hong, L.

TITLE Catalytically active recombinant memapsin and methods of use  
thereof

JOURNAL Patent: US 6545127-A 1 08-APR-2003;  
Location/Qualifiers  
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Alignment of: us-10-726-967a-1 x AR305033 ..

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Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
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Gaps:	0		

## Alignment:

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|||||  
25 ACCGACGACGGCATCGGCTGCCCTGCGCAGCGGCTGGGGGGGCGCCCC 74  
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38 OleuGlyLeu 41  
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75 CCTGGGGGCTG 84

Sequence name: rgep2ndb:AX062111

## Sequence documentation:

LOCUS AX062111 3252 bp DNA linear PAT 24-JAN-2001  
DEFINITION Sequence 1 from Patent WO0100665.  
ACCESSION AX062111  
VERSION AX062111.1 GI:12540032

KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens

REFERENCE  
AUTHORS Tang, J.J., Hong, L. and Ghosh, A.K.  
TITLE Inhibitors of memapsin 2 and use thereof  
JOURNAL Patent: WO 0100665-A 1 04-JAN-2001;  
Oklahoma Medical Research Foundation (US);  
THE UNIVERSITY OF ILLINOIS (US)

FEATURES  
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Alignment of: us-10-726-967a-1 x AX062111 ..

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Sequence name: rgep2ndb:AX063201

## Sequence documentation:

LOCUS AX063201 3252 bp DNA linear PAT 24-JAN-2001  
DEFINITION Sequence 1 from Patent WO0100663.  
ACCESSION AX063201  
VERSION AX063201.1 GI:12541045

KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens

REFERENCE  
AUTHORS Tang, J.J., Lin, X. and Koelsch, G.  
TITLE Catalytically active recombinant memapsin and methods of use there  
JOURNAL Patent: WO 0100663-A 1 04-JAN-2001;  
Oklahoma Medical Research Foundation (US)

REFERENCE  
AUTHORS Tang, J.J., Lin, X. and Koelsch, G.  
TITLE Catalytically active recombinant memapsin and methods of use there  
JOURNAL Patent: WO 0100663-A 1 04-JAN-2001;  
Oklahoma Medical Research Foundation (US)

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Alignment of: us-10-726-967a-1 x AX063201 ..

## Alignment segment 1/1: (+)

Quality:	104.00	Score:	38.3
Matching length:	20	Total length:	20
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Gaps:	0		

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
25 ACCGACGACGGCATCGGCTGCCCTGCGCAGCGGCTGGGGGGGCGCCCC 74  
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38 OleuGlyLeu 41  
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75 CCTGGGGGCTG 84

Sequence name: rgep2ndb:AX472368

## Sequence documentation:

LOCUS AX472368 3252 bp DNA linear PAT 09-AUG-2002  
DEFINITION Sequence 1 from Patent WO02053594.  
ACCESSION AX472368  
VERSION AX472368.1 GI:22207364

KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens

REFERENCE  
AUTHORS Ghosh, A.K., Koelsch, G. and Tang, J.J.  
TITLE Inhibitors of memapsin 2 and use thereof  
JOURNAL Patent: WO 02053594-A 1 11-JUL-2002;  
OKLAHOMA MED RES FOUND (US); TRUSTEES OF THE UNIVERSITY OF ILLINOIS (US)

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Alignment of: us-10-726-967a-1 x AX472368 ..

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Quality:	104.00	Score:	38.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
25 ACCGACGACGGCATCGGCTGCCCTGCGCAGCGGCTGGGGGGGCGCCCC 74  
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38 cLeuGIyleu 41  
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75 CCTGGGGCTG 84

Sequence name: rgep2ndb:AX700453

Sequence documentation:

LOCUS AX700453 3252 bp DNA linear PAT 03-APR-2003  
DEFINITION Sequence 8 from Patent WO03012089.  
ACCESSION AX700453  
VERSION AX700453.1 GI:29536242

KEYWORDS Homo sapiens (human)

SOURCE

ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

AUTHORS 1  
Shariff, A., Cleasby, A., Bruinzeel, W. D., Maure, S. L., Tickle, I. and  
Crystal structure of beta-site app cleaving enzyme (bace) and use  
thereof  
Patent: WO 03012089-A 8 13-FEB-2003;

JOURNAL Astez Technology Limited (GB) ; JANSSEN PHARMACEUTICA N.V. (BE)

FEATURES

source 1..3252  
/organism="Homo sapiens"  
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Alignment of: us-10-726-967a-1 x AX700453 ..

Alignment segment 1/1: (+)

Matching length:	Quality:	104.00	Score:	38.3
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	20
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Gaps:	0			

Alignment:

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75 CCTGGGGCTG 84

Sequence name: rgep2ndb:AF200193

Sequence documentation:

LOCUS AF200193 3252 bp mRNA linear PRI 16-FEB-2000  
DEFINITION Homo sapiens memapsin 2 mRNA, partial cds.  
ACCESSION AF200193  
VERSION AF200193.1 GI:6470292

KEYWORDS Homo sapiens (human)

SOURCE

ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

AUTHORS 1 (bases 1 to 3252)  
Lin, X., Koelsch, G., Wu, S., Downs, D., Dashit, A. and Tang, J.  
Human aspartic protease memapsin 2 cleaves the beta-secretase site  
of beta-amyloid precursor protein

JOURNAL Proc. Natl. Acad. Sci. U.S.A. 97 (4), 1456-1460 (2000)

MEDLINE

PUBMED 10677483  
2 (bases 1 to 3252)  
Lin, X., Koelsch, G. and Tang, J.  
Direct Submission  
Submitted (28-OCT-1999) Protein Studies Program, Oklahoma Medical  
Research Foundation, 825 N.E. 13th Street, Oklahoma City, OK 73104,

FEATURES USA  
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Alignment of: us-10-726-967a-1 x AF200193 ..

Alignment segment 1/1: (+)

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Gaps:	0			

Alignment:

22 ThrGlnHsGIyleArgLeuProLeuArgSerGIyleuGIyalaPr 38  
|||||  
25 ACCCAGCAGCGGCATCCGCTGCCCTGGCAGCGGCGTGGGGGGCCCC 74  
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38 cLeuGIyleu 41  
|||||  
75 CCTGGGGCTG 84

Sequence name: rgep2ndb:BC065492

Sequence documentation:

LOCUS BC065492 3893 bp mRNA linear PRI 30-JUN-2004  
DEFINITION Homo sapiens beta-site app-cleaving enzyme 1, transcript variant a,  
mRNA (cDNA clone MGC:71162 IMAGE:6538154), complete cds.

ACCESSION BC065492  
VERSION BC065492.1 GI:41350853

KEYWORDS MGC.

SOURCE

ORGANISM Homo sapiens (human)  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

AUTHORS 1 (bases 1 to 3893)  
Straussberg, R. L., Peingold, E. A., Grouse, L. H., Derge, J. G.,  
Klausner, R. D., Collins, F. S., Wagner, L., Shemen, C. M., Schler, G. D.,  
Altschul, S. F., Zebberg, B., Buettow, K. H., Scheffer, C. F., Huet, N. K.,  
Hopkins, R. F., Jordan, H., Moore, T., Max, S. I., Wang, Y., Hsieh, F.,  
Diatchenko, L., Marusina, K., Farmer, A. A., Rubin, G. M., Hong, L.,  
Stapleton, M., Soares, M. B., Bonaldo, M. F., Casavant, T. L.,  
Sheertz, T. E., Brownstein, M. J., Ueda, T. B., Toshitani, S.,  
Carninci, P., Frange, C., Rana, S. S., Loquellano, N. A., Peters, G. J.,  
Abramson, R. D., Mullany, S. J., Bosak, S. A., McEwan, P. J.,  
McKernan, K. J., Malek, J. A., Gunaratne, P. H., Richards, S.,  
Worley, K. C., Hale, S., Garcia, A. M., Gay, L. J., Hui, Y. S. W.,  
Villalón, D. K., Muzny, D. M., Sodergren, E. J., Lu, X., Gibbs, R. A.,  
Fahey, J., Helton, E., Ketterman, M., Madan, A., Rodriguez, S.,  
Sanchez, A., Whitting, M., Madan, A., Young, A. C., Shevchenko, Y.,  
Bouffard, G. G., Blakeley, R. W., Touchman, J. W., Green, E. D.,

**TITLE**  
**JOURNAL**  
**PUBMED**  
**REFERENCE**  
**AUTHORS**  
**TITLE**  
**JOURNAL**

Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalek, U., Smalls, D.E., Schnerker, A., Schein, J.E., Jones, S.J. and Marr, M.A., Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences  
 Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)  
 2 (bases 1 to 3893)  
 Strauberg, R.  
 Direct Submission  
 Submitted (26-JUN-2004) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA

**REMARK**  
**COMMENT**

NIH-MGC Project URL: <http://mgc.nci.nih.gov>  
 Contact: MGC help desk  
 Email: [cgaps-remail.nih.gov](mailto:cgaps-remail.nih.gov)  
 Tissue Procurement: ATCC  
 cDNA Library Preparation: Rubin Laboratory  
 cDNA Library Arrayed by: The I.M.A.G.E. Consortium (ULNL)  
 DNA Sequencing by: National Institutes of Health Intramural Sequencing Center (NISC),  
 Gaithersburg, Maryland;  
 Web site: <http://www.nisc.nih.gov/>  
 Contact: [nisc.mgc@nih.gov](mailto:nisc.mgc@nih.gov)  
 Address: N. Ayle, K. Beckstrom-Sternberg, S.M., Benjamin, B., Blakesley, R.W., Bouffard, G.G., Breen, K., Brinkley, C., Brooks, S., Dietrich, N.L., Granite, S., Guan, X., Gupta, J., Haghighi, P., Hansen, N., Ho, S.-L., Karlins, E., Kwong, P., Latic, P., Legaspi, R., Maduro, Q.L., Mastello, C., Maekari, B., Mastrian, S.D., McCloskey, J.C., McDowell, J., Pearson, R., Stantirpop, S., Thomas, P.J., Touchman, J.W., Turgeson, C., Vogt, J.L., Walker, M.A., Wetherby, K.D., Wiggins, L., Young, A., Zhang, L.-H. and Green, E.D.

**FEATURES**  
**source**

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 This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 21040369.  
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Alignment of: us-10-726-967a-1 x BC065492 ..  
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Quality:	104.00	Score:	38.5
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Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
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Alignment:

22 ThrGlnHISGLYILEARGLeuProLeuArgSerGlyLeuGlyAlaPr 38  
 535 ACCGACGACGGCATCCGGCTGCCCTGCCGACGGCCTGGGGGGCCCC 574  
 38 OleuGlyLeu  
 575 CCTGGGGCTG  
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Sequence name: rgep2ndb:CQ824594

Sequence documentation:  
 LOCUS CQ824594 5625 bp RNA linear PAT 21-JUN-2004  
 DEFINITION Sequence 21 from Patent WO2004047872.  
 ACCESSION CQ824594  
 VERSION CQ824594.1 GI:49021634  
 KEYWORDS  
 SOURCE Homo sapiens (human)  
 ORGANISM Homo sapiens  
 Eukaryote; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.

**REFERENCE**  
**AUTHORS**  
**TITLE**  
**JOURNAL**

Kaemmerer, W.F.  
 Treatment of neurodegenerative disease through intracranial delivery of siRNA  
 Patent: WO 2004047872-A 21 10-JUN-2004;  
 Medtronic, Inc. (US)

**FEATURES**  
**source**

Location/Qualifiers

1. 5625  
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 (BACE), transcript variant d, mRNA. ACCESSION NM\_138973;  
 VERSION NM\_138973.1 GI:21040367"

Alignment of: us-10-726-967a-1 x CQ824594 ..

Alignment segment 1/1: (+)

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Alignment:

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 38 OleuGlyLeu  
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Sequence name: rgep2ndb:CQ824593

Sequence documentation:  
 LOCUS CQ824593 5700 bp RNA linear PAT 21-JUN-2004

DEFINITION Sequence 20 from Patent WO2004047872.  
ACCESSION CQ824593  
VERSION CQ824593.1 GI:49021630  
KEYWORDS  
ORGANISM Homo sapiens (human)  
SOURCE Homo sapiens  
REFERENCE Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
AUTHORS Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
TITLE Kaemmerer, W.F.  
JOURNAL Treatment of neurodegenerative disease through intracranial  
delivery of siRNA  
Patent: WO 2004047872-A 20 10-JUN-2004;  
Medtronic, Inc. (US)  
FEATURES  
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(BACE), tr anscript variant C, mRNA. ACCESSION NM\_138971;  
VERSION NM\_138971.1 GI:21040363"  
Alignment of: us-10-726-967a-1 x CQ824593 ..  
Alignment segment 1/1: (+)  
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Gaps: 0  
Total Length: 20  
Total Percent Identity: 100.00  
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38 OleuGlyLeu 41  
560 CCTGGGGCTG 569  
Sequence name: rgep2ndb:CQ824592  
Sequence documentation:  
LOCUS CQ824592 5757 bp RNA linear PAT 21-JUN-2004  
DEFINITION Sequence 19 from Patent WO2004047872.  
ACCESSION CQ824592  
VERSION CQ824592.1 GI:49021628  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
REFERENCE Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
AUTHORS Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
TITLE Kaemmerer, W.F.  
JOURNAL Treatment of neurodegenerative disease through intracranial  
delivery of siRNA  
Patent: WO 2004047872-A 19 10-JUN-2004;  
Medtronic, Inc. (US)  
FEATURES  
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DEFINITION Homo sapiens beta-site APP-cleaving enzyme  
(BACE), tr anscript variant D, mRNA. ACCESSION NM\_138972;  
VERSION NM\_138972.1 GI:21040365"

Alignment of: us-10-726-967a-1 x CQ824592 ..  
Alignment segment 1/1: (+)  
Matching Quality: 104.00  
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LOCUS CQ824591 5832 bp RNA linear PAT 21-JUN-2004  
DEFINITION Sequence 18 from Patent WO2004047872.  
ACCESSION CQ824591  
VERSION CQ824591.1 GI:49021626  
KEYWORDS  
SOURCE Homo sapiens (human)  
Alignment of: us-10-726-967a-1 x AX364933 ..  
Alignment segment 1/1: (+)  
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Total Percent Identity: 100.00  
Gaps: 0  
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38 OleuGlyLeu 41  
560 CCTGGGGCTG 569  
Sequence name: rgep2ndb:AX364933  
Sequence documentation:  
LOCUS AX364933 5757 bp DNA linear PAT 15-FEB-2002  
DEFINITION Sequence 84 from Patent WO0206315.  
ACCESSION AX364933  
VERSION AX364933.1 GI:18696823  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
REFERENCE Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
AUTHORS Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
TITLE Mintz, L., Freilich, S., and Bernstein, J.  
JOURNAL Novel nucleic acid and amino acid sequences  
Patent: WO 0206315-A 84 24-JAN-2002;  
Comugen Ltd. (IL)  
FEATURES  
source Location/Qualifiers  
1..5757  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"  
Alignment of: us-10-726-967a-1 x AX364933 ..  
Alignment segment 1/1: (+)  
Matching Quality: 104.00  
Percent Similarity: 100.00  
Total Percent Identity: 100.00  
Gaps: 0  
Total Length: 20  
Total Percent Identity: 100.00  
Alignment:  
22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
518 ACCGACGCGGCGATCCGGCTGCCCTCGCGACGCGGCTGGGGGGCGCCCC 567  
38 OleuGlyLeu 41  
568 CCTGGGGCTG 577  
Sequence name: rgep2ndb:CQ824591  
Sequence documentation:  
LOCUS CQ824591 5832 bp RNA linear PAT 21-JUN-2004  
DEFINITION Sequence 18 from Patent WO2004047872.  
ACCESSION CQ824591  
VERSION CQ824591.1 GI:49021626  
KEYWORDS  
SOURCE Homo sapiens (human)

## ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

## REFERENCE

1 Kaemmerer, W. F.

Treatment of neurodegenerative disease through intracranial

## AUTHORS

Patent: WO 2004047872-A 18 10-JUN-2004;

## JOURNAL

Medtronic, Inc. (US)

## FEATURES

Location/Qualifiers

1. .5832

/organism="Homo sapiens"

/mol\_type="unassigned RNA"

/db\_xref="taxon:9606"

## misc\_feature

/note="ACCESSION NM\_012104 VERSION NM\_012104.2 GI:21040369

LOCUS BACE 5832 bp mRNA linear PRI 05-NOV-2002 DEFINITION

Homo sapiens beta-site APP-cleaving enzyme (BACE), tr

nucleic acid variant a, mRNA."

Alignment of: us-10-726-967a-1 x CQ824591 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	38.8
Matching Percent Similarity:	100.00	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

## Alignment:

22	ThrglnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr	38
510	ACCCAGCAGCGCATCGGCTGCCCTGCCAGCGGCGGCGGCGCC	559
38	oleuGlyLeu	41
560	CCTGGGCGCTG	569

Sequence name: rgep2ndb:CQ726974

## Sequence documentation:

LOCUS CQ726974 5842 bp DNA linear PAT 03-FEB-2004

DEFINITION Sequence 12908 from Patent WO2068579.

ACCESSION CQ726974

VERSION CQ726974.1 GI:42291589

## KEYWORDS

Homo sapiens (human)

## SOURCE

Homo sapiens

## ORGANISM

Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

1 Venter, C. J., Adams, M. C., Li, P. W. and Myers, E. W.

Kits, such as nucleic acid arrays, comprising a majority of

human exons or transcripts, for detecting expression and other uses

thereof

JOURNAL

Patent: WO 02068579-A 12908 06-SEP-2002;

PE Corporation (NY) (US)

Location/Qualifiers

1. .5842

/organism="Homo sapiens"

/mol\_type="unassigned DNA"

/db\_xref="taxon:9606"

## FEATURES

source

Quality: 104.00

Matching length: 20

Matching Percent Similarity: 100.00

Total Percent Similarity: 100.00

Total Percent Identity: 100.00

Gaps: 0

## Alignment:

22	ThrglnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr	38
515	ACCCAGCAGCGCATCGGCTGCCCTGCCAGCGGCGGCGGCGCC	564
38	oleuGlyLeu	41
565	CCTGGGCGCTG	574

Sequence name: rgep2ndb:AF201468

## Sequence documentation:

LOCUS AF201468 5878 bp mRNA linear PRI 19-DEC-1999

DEFINITION Homo sapiens APP beta-secretase mRNA, complete cds.

ACCESSION AF201468

VERSION AF201468.1 GI:6601444

## KEYWORDS

Homo sapiens (human)

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

1 (bases 1 to 5878)

AUTHORS

Sinha, S., Anderson, J. P., Barbours, R., Basl, G. S., Caccavello, R.,

David, D., Doan, M., Dovey, H. F., Frigon, N., Hong, J., Lieberburg, I.,

Jacobson-Croak, K., Jewett, N., Keim, P., Knops, J., Lieberburg, I.,

Power, M., Tan, H., Tatsuno, G., Tung, J., Schenk, D., Seubert, P.,

Suomenaari, S., Wang, S., Walker, D., Zhao, J., McConlogue, L. and

John, V.

Purification and cloning of amyloid precursor protein

beta-secretase from human brain

Nature 402 (6761), 537-540 (1999)

MEDLINE 20057171

PUBMED 10591214

REFERENCE

2 (bases 1 to 5878)

AUTHORS

Basl, G. S., Power, M. D., Wang, S., Tatsuno, G., Frigon, N., Doan, M.,

Hong, G., Keim, P., Anderson, J., Sinha, S. and McConlogue, L. M.

Direct Submission

Submitted (03-NOV-1999) Gene Expression Group, Bian

Pharmaceuticals, Inc., 800 Gateway Blvd., S. San Francisco, CA

94080, USA

JOURNAL

Location/Qualifiers

1. .5878

/organism="Homo sapiens"

/mol\_type="mRNA"

/db\_xref="taxon:9606"

/chromosome="11"

/map="D11S4352"

/tissue\_type="brain"

/issue="1960"

/function="cleaves APP at the beta-cleavage site"

/note="membrane type aspartyl protease"

/product="APP beta-secretase"

/protein\_id="AF18982.1"

/translational="MA0ALPWLILMMGAGVLPAGHTGIRLPARGSLGAPGLRLP

RETDEBEPBERGRGSFVEMVDNLKSGQGYEMTVGSPOTNLIVDGSSNFVAG

AAPPLPLRYOOLSSRYDLARKGVVPTQKMGELGDTLSI PHGNVYRANI

AATTSDDKPFINSNNBGLIGLVAIARPDLSLEPPDSLVQTHVPLPSIOLCA

GFLNOSVLAIVGSMTIGIDHSUTSLMTPTIRREYEVIVIVRINQDLMK

DCKEYVDSKIVDSGTTLRLPKRVEAAVKSIIKASSTKPFDFWLGQVLCWQNG

TTPMNI FPIVSLYMGVTVNQSRTITLPQOYLRPVEDVATISODDCVKAISOSTGT

VMGAVIMEGFYVVRARKRIGPAVACHVDFRPAAGVPTLDMEDCGYINPOT

DESTMTIAVMAICALPMLPLCLAVWCQRCRLCRQCHDPAIDISILK"

Alignment of: us-10-726-967a-1 x AF201468 ..

Alignment segment 1/1: (+)

Quality: 104.00

Matching length: 20

Matching Percent Similarity: 100.00

Total Percent Similarity: 100.00

Total Percent Identity: 100.00

Matching length: 20 Total length: 20  
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
 Gaps: 0

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIAPr 38  
 518 ACCGACGACGCGATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 567  
 38 olenglyleu 41  
 568 CCGGGGGCTG 577

Sequence name: rgep2ndb:AR404205

## Sequence documentation:

LOCUS AR404205 16080 bp DNA linear PAT 18-DEC-2003  
 DEFINITION Sequence 48 from patent US 6627739.  
 ACCESSION AR404205  
 VERSION AR404205.1 GI:40152245  
 KEYWORDS  
 SOURCE Unknown.  
 ORGANISM Unknown.

REFERENCE 1 (bases 1 to 16080)  
 AUTHORS Anderson,J.P., Basi,G., Doan,M.T., Frigon,N., John,V., Power,M.,  
 Shima,S., Tachuno,G., Tung,J., Wang,S. and McConlogue,L.  
 TITLE .beta.-secretase enzyme compositions and methods  
 JOURNAL Patent: US 6627739-A 48 30-SEP-2003;  
 FEATURES Location/Qualifiers  
 source 1..16080  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR404205 ..

## Alignment segment 1/1: (+)

Quality: 104.00 Total Length: 39.7  
 Matching length: 20 Matching Percent Identity: 100.00  
 Matching Percent Similarity: 100.00 Total Percent Identity: 100.00  
 Total Percent Similarity: 100.00 Gaps: 0

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIAPr 38  
 1738 ACCGACGACGCGATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 1787  
 38 olenglyleu 41  
 1788 CCGGGGGCTG 1797

Sequence name: rgep2ndb:AB032975

## Sequence documentation:

LOCUS AB032975 5814 bp mRNA linear PRI 17-MAY-2001  
 DEFINITION Homo sapiens mRNA for KIAA1149 protein, partial cds.  
 ACCESSION AB032975  
 VERSION AB032975.2 GI:14133242  
 KEYWORDS  
 SOURCE Homo sapiens (human)  
 ORGANISM Homo sapiens  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1 (bases)  
 AUTHORS Hirogawa,M., Nagase,T., Ishikawa,K., Kikuno,R., Nomura,N. and  
 Ohara,O.  
 TITLE Characterization of cDNA clones selected by the Genemark analysis  
 from size-fractionated cDNA libraries from human brain

JOURNAL DNA Res. 6 (5), 329-336 (1999)  
 MEDLINE 20039618  
 PUBMED 10574461  
 REFERENCE 2 (bases 1 to 5814)

AUTHORS Ohara,O., Nagase,T. and Kikuno,R.  
 TITLE Direct Submission  
 JOURNAL Submitted (04-OCT-1999) Osamu Ohara, Kazusa DNA Research Institute,  
 Laboratory of DNA Technology, 1532-3 Yata, Kisarazu, Chiba  
 292-0812, Japan (E-mail:cdnainfo@kazusa.or.jp,  
 URL:http://www.kazusa.or.jp/huge/, Tel:+81-438-52-3913,  
 Fax:+81-438-52-3914)

COMMENT On May 17, 2001 this sequence version replaced gi:6330044.  
 FEATURES Location/Qualifiers  
 source 1..5814  
 /organism="Homo sapiens"  
 /mol\_type="mRNA"  
 /db\_xref="taxon:9606"  
 /clone="EG04087"  
 /sex="male"  
 /issue\_type="brain"  
 /clone\_lib="pBluescriptII SK plus"  
 /dev\_stage="adult"  
 /note="vector:pBluescriptII SK plus. This sequence is  
 replaced that of hg01289 cDNA as a representative cDNA  
 sequence for KIAA1149"  
 1..5814  
 /gene="KIAA1149"  
 /cdd="351..1949  
 /gene="KIAA1149"  
 /note="Start codon is not identified."  
 /codon\_start=1  
 /product="KIAA1149 protein"  
 /protein\_id="BA86463.2"  
 /db\_xref="GI:14133243"  
 /translation="EATSTQIWGPAGTDVGCPEPRGPBGRGPPMPKPCGSCGMA  
 RECCLPATPASTAGSCPCAAAGAGLGLRLPRETDEBEPGRGSPVEMTDNRGKS  
 GGGYVEMTVGSPQPTLNILVDTSNFAVGAAPHPFLHRYQLQSLSTYDLRGVY  
 VPTQKMGELGTDIVSIPIHGPNTYVANIATITESPKEPINSNMEGIGLVAET  
 AAPDSLSPPPSLKYKTHVPHNLSLQCGAGPINSSEVLASVGSNTIGTIDHSIT  
 TGSIMTYPIREMYEIVIVRVEINQDLKDCIKYNDKSIVDSGTNLNLPKVF  
 AAVKSIKAASSTKRPDGFMLGEQLVCWQAGTTPWNIIPVLSILMGKVTQSPRIT  
 LPOQYLRPEVDATSQDCCYKFAISQSTGTGAVIMEGTVVFDRAKRIGFVSA  
 CHVHEFRFLAAGPFTLMDGCGNIPQTDSTLMTIAYVMAICALFMLPLCLMW  
 CQWRCLRCLRQHDHPADDISLKK"

gene  
 CDS

Alignment of: us-10-726-967a-1 x AB032975 ..

## Alignment segment 1/1: (+)

Quality: 91.00 Total Length: 61  
 Matching length: 20 Matching Percent Identity: 100.00  
 Matching Percent Similarity: 100.00 Total Percent Identity: 100.00  
 Total Percent Similarity: 100.00 Gaps: 0

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIAPr 38  
 506 ACCGACGACGCGATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 555  
 38 roleuglyleu 41  
 556 CCGGGGGCTG 566

Sequence name: rgep2ndb:AR202196

## Sequence documentation:

LOCUS AR202196 1506 bp DNA linear PAT 20-APR-2002  
 DEFINITION Sequence 1 from patent US 6361975.  
 ACCESSION AR202196  
 VERSION AR202196.1 GI:20256735  
 KEYWORDS



SOURCE	Unknown.
ORGANISM	Unclassified.
REFERENCE	1 (bases 1 to 1506)
AUTHORS	Christie,G., Li,X., Powell,D.J. and Zhu,Y.
TITLE	Mouse aspartic secretase-2(mASP-2)
JOURNAL	Patent: US 6361975-A 1 26-MAR-2002;
FEATURES	Location/Qualifiers
source	1..1506 /organism="unknown" /mol_type="unassigned DNA"

Alignment of: us-10-726-967a-1 x ARS02196 ..

Alignment segment 1/1: (++)

Quality:	77.00	Score:	94.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22	ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIle	38
64	ACCACTCGGCATCGGCTGCCCTTCGACAGCGGCGCTGGCAGGCGACC	113
38	oleuGlyLeu	41
114	CTGGGGCCTTG	123

Sequence name: rsep2ndb:BD235888

Sequence documentation:

LOCUS	BD235888	2043 bp	DNA	linear	PAT 17-JUL-2003
DEFINITION	Alzheimer's disease secretase.				
ACCESSION	BD235888				
VERSION	BD235888.1	GI:33045658			
KEYWORDS	JP 2002526081-A/4.				
SOURCE	Mus musculus (house mouse)				
ORGANISM	Mus musculus				
	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.				
	1 (bases 1 to 2043)				
	Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.				
REFERENCE	Alzheimer's disease secretase				
AUTHORS	Patent: JP 2002526081-A 4 20-AUG-2002;				
	PHARMACIA AND UPJOHN CO				
TITLE	Mus musculus (mouse)				
JOURNAL	PN JP 2002526081-A/4				
COMMENT	PD 20-AUG-2002				
	PF 23-SEP-1999 JP 2000574268				
	PR 24-SEP-1998 US 60/101594				
	PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI HEINRIKSON,				
	PI LUIS A PARODI, RIOJANG YAN				
	PC C12N15/09,A61K45/00,A61P25/28,C07K14/47,C07K16/18,C12N1/15, PC C12N1/19,				
	PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/15,				
	PC G01N33/50//C12N1/21,C12P1:19,C12N15/00,C12N5/00 CC				
	Alzheimer's disease secretase				
	EH Key Location/Qualifiers				
	FT source 1..2043				
	FT Location/Qualifiers				
	1..2043 /organism="Mus musculus (mouse)".				
FEATURES	Location/Qualifiers				
source	1..2043 /organism="Mus musculus" /mol_type="genomic DNA" /db_xref="taxon:10090"				

Alignment of: us-10-726-967a-1 x BD235888 ..	
Alignment segment 1/1: (+)	
Quality: 77.00	Score: 94.8
Matching length: 20	Total length: 20
Matching Percent Similarity: 90.00	Matching Percent Identity: 80.00
Total Percent Similarity: 90.00	Total Percent Identity: 80.00
Gaps: 0	
Alignment:	
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38	
:	
64 ACCCATCTCGGCATCCGGCTGCCCCCTTCGCGAGCGGCGCTCGAGGCGCAC 113	
38 oLeuGlyLeu	41
114 CTGCGGCGCTG	123
Sequence name: rgep2ndb:AR269226	
Sequence documentation:	
LOCUS AR269226 2043 bp DNA linear PAT 10-APR-2003	
DEFINITION Sequence 7 from patent US 6500667.	
ACCESSION AR269226	
VERSION AR269226.1 GI:29700194	
KEYWORDS	
SOURCE Unknown.	
ORGANISM Unknown.	
Alignment of: us-10-726-967a-1 x AR224095 ..	
Alignment segment 1/1: (+)	
Quality: 77.00	Score: 94.8
Matching length: 20	Total length: 20
Matching Percent Similarity: 90.00	Matching Percent Identity: 80.00
Total Percent Similarity: 90.00	Total Percent Identity: 80.00
Gaps: 0	
Alignment:	
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38	
:	
64 ACCCATCTCGGCATCCGGCTGCCCCCTTCGCGAGCGGCGCTCGAGGCGCAC 113	
38 oLeuGlyLeu	41
114 CTGCGGCGCTG	123
Sequence name: rgep2ndb:AR224095	
Sequence documentation:	
LOCUS AR224095 2043 bp DNA linear PAT 26-SEP-2002	
DEFINITION Sequence 7 from patent US 6440698.	
ACCESSION AR224095	
VERSION AR224095.1 GI:23332755	
KEYWORDS	
SOURCE Unknown.	
ORGANISM Unknown.	
REFERENCE 1 (bases 1 to 2043)	
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and Yan,R.	
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor	
JOURNAL Patent: US 6440698-A 7 27-AUG-2002;	
FEATURES Location/Qualifiers	
source 1..2043	
/organism="Unknown"	
/mol_type="genomic DNA"	

## Unclassified.

REFERENCE 1 (bases 1 to 2043)  
 AUTHORS Gurney,M.E., Blenkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
 Yan,R.  
 TITLE Apateryl protease 2 (Atp2) antisense oligonucleotides  
 JOURNAL Patent: US 650667-A 7 31-DEC-2002;  
 FEATURES location/Qualifiers  
 source 1..2043  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269226 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	94.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

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22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCATCTCGGCATCGGCTGCCCTTCGACGCGGCTGCAGGGCCACC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTGGGGCCCTG 123

```

Sequence name: rgep2ndb:AR478780

Sequence documentation:

LOCUS AR478780 2043 bp DNA linear PAT 14-MAY-2004  
 DEFINITION Sequence 7 from patent US 6699671.  
 ACCESSION AR478780  
 VERSION AR478780.1 GI:47237500  
 KEYWORDS  
 SOURCE Unknown.  
 ORGANISM Unclassified.  
 REFERENCE 1 (bases 1 to 2043)  
 AUTHORS Gurney,M.E., Blenkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
 Yan,R.  
 TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
 therefor  
 JOURNAL Patent: US 6699671-A 7 02-MAR-2004;  
 FEATURES location/Qualifiers  
 source 1..2043  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478780 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	94.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

```

22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCATCTCGGCATCGGCTGCCCTTCGACGCGGCTGCAGGGCCACC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTGGGGCCCTG 123

```

Sequence name: rgep2ndb:AR487347

Sequence documentation:  
 LOCUS AR487347 2043 bp DNA linear PAT 14-MAY-2004  
 DEFINITION Sequence 7 from patent US 6706485.  
 ACCESSION AR487347  
 VERSION AR487347.1 GI:47252445  
 KEYWORDS  
 SOURCE Unknown.  
 ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 2043)

AUTHORS Gurney,M.E., Blenkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
 Yan,R.

TITLE Method of identifying agents that inhibit APP processing activity

JOURNAL Patent: US 6706485-A 7 16-MAR-2004;  
 FEATURES location/Qualifiers  
 source 1..2043  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487347 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	94.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

```

22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCATCTCGGCATCGGCTGCCCTTCGACGCGGCTGCAGGGCCACC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTGGGGCCCTG 123

```

Sequence name: rgep2ndb:AR531986

Sequence documentation:

LOCUS AR531986 2043 bp DNA linear PAT 08-OCT-2004  
 DEFINITION Sequence 7 from patent US 6727074.  
 ACCESSION AR531986  
 VERSION AR531986.1 GI:53920520  
 KEYWORDS  
 SOURCE Unknown.  
 ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 2043)

AUTHORS Gurney,M.E., Blenkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
 Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
 therefor

JOURNAL Patent: US 6727074-A 7 27-APR-2004;  
 FEATURES location/Qualifiers  
 source 1..2043  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531986 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	94.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCATCTCGGATCGGCTGCCCTTCGACAGCGGCTGGCGGCCACC 113  
38 OLeuGlyLeu 41  
|||||  
114 CCTGGGCGCTG 123

Sequence name: rgep2ndb:AR540888

## Sequence documentation:

LOCUS AR540888 2043 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 7 from patent US 6737510.  
ACCESSION AR540888  
VERSION AR540888.1 GI:53932401  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 2043)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
thereof  
JOURNAL Patent: US 6737510-A 7 18-MAY-2004;  
FEATURES Location/Qualifiers  
source 1..2043  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540888 ..

## Alignment segment 1/1: (+)

Quality:	77.00	Score:	94.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCATCTCGGATCGGCTGCCCTTCGACAGCGGCTGGCGGCCACC 113  
38 OLeuGlyLeu 41  
|||||  
114 CCTGGGCGCTG 123

Sequence name: rgep2ndb:AR560097

## Sequence documentation:

LOCUS AR560097 2043 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 7 from patent US 6753163.  
ACCESSION AR560097  
VERSION AR560097.1 GI:53970464  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 2043)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6753163-A 7 22-JUN-2004;  
FEATURES Location/Qualifiers  
source 1..2043  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560097 ..  
Alignment segment 1/1: (+)

Quality:	77.00	Score:	94.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCATCTCGGATCGGCTGCCCTTCGACAGCGGCTGGCGGCCACC 113  
38 OLeuGlyLeu 41  
|||||  
114 CCTGGGCGCTG 123

Sequence name: rgep2ndb:AX105389

## Sequence documentation:

LOCUS AX105389 2043 bp DNA linear PAT 30-APR-2001  
DEFINITION Sequence 7 from Patent WO0123533.  
ACCESSION AX105389  
VERSION AX105389.1 GI:13921513  
KEYWORDS  
SOURCE Mus musculus (house mouse)  
ORGANISM Mus musculus

REFERENCE 1  
AUTHORS Gurney,M. and Bienkowski,M.J.  
TITLE Alzheimer's disease secretase, app substrates therefor, and uses  
therefor

JOURNAL Patent: WO 0123533-A 7 05-APR-2001;  
FEATURES Pharmacia & Upjohn Company (US)  
source Location/Qualifiers  
1..2043  
/organism="Mus musculus"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:10090"

Alignment of: us-10-726-967a-1 x AX105389 ..

## Alignment segment 1/1: (+)

Quality:	77.00	Score:	94.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCATCTCGGATCGGCTGCCCTTCGACAGCGGCTGGCGGCCACC 113  
38 OLeuGlyLeu 41  
|||||  
114 CCTGGGCGCTG 123

Sequence name: rgep2ndb:AX573827

## Sequence documentation:

LOCUS AX573827 2043 bp DNA linear PAT 07-JAN-2003  
DEFINITION Sequence 7 from Patent EP1249496.  
ACCESSION AX573827  
VERSION AX573827.1 GI:27551479  
KEYWORDS

SOURCE Mus musculus (house mouse)  
ORGANISM Mus musculus  
REFERENCE Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.  
AUTHORS 1  
TITLE Gurney, M. and Bienkowski, M.J.  
JOURNAL Alzheimer's disease secretase, app substrates therefor, and uses therefor  
Patent: EP 1249498-A 7 16-OCT-2002;  
PHARMACIA & UPJOHN COMPANY (US)  
FEATURES Location/Qualifiers  
source 1..2043  
/organism="Mus musculus"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:10090"

Alignment of: us-10-726-967a-1 x AX573827 ..  
Alignment segment 1/1: (+)  
Matching Quality: 77.00 Score: 94.8  
Length: 20  
Percent Similarity: 90.00 Total length: 20  
Total Percent Identity: 80.00  
Gaps: 0 Total Percent Identity: 80.00

Alignment:  
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
64 ACCATCTCGGCATCCGGCTGCCCTTCGCACGGCGCTGCAGGGCCACC 113  
38 OLeuGlyLeu 41  
114 CCTGGGCGCTG 123  
Sequence name: rgep2ndb:AF200346

Sequence documentation:  
LOCUS AF200346 2043 bp mRNA linear ROD 12-DEC-1999  
DEFINITION Mus musculus aspartyl protease 2 mRNA, complete cds.  
ACCESSION AF200346  
VERSION AF200346.1 GI:6561819  
KEYWORDS  
SOURCE Mus musculus (house mouse)  
ORGANISM Mus musculus  
REFERENCE Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.  
AUTHORS 1 (bases 1 to 2043)  
TITLE Van, R., Bienkowski, M.J., Shuck, M.E., Mao, H., Tony, M.C.,  
JOURNAL Pauley, A.M., Braashner, J.R., Strattan, N.C., Mathews, W.R., Buhl, A.E.,  
Carter, D.B., Tomasselli, A.G., Parodi, L.A., Heinrichson, R.L. and  
Gurney, M.E.  
FEATURES Membrane-anchored aspartyl protease with Alzheimer's disease  
beta-secretase activity  
Mature 402 (6761), 533-537 (1999)  
JOURNAL MEDLINE  
PUBMED 20057170  
MEDLINE 10591213  
REFERENCE 2 (bases 1 to 2043)  
AUTHORS Bienkowski, M.J., Shuck, M.E., Slightom, J.L. and Drong, R.F.  
TITLE Direct Submission  
JOURNAL Submitted (29-OCT-1999) Genome Research, PharmacistsUpjohn, 301  
Henrietta, Kalamazoo, MI 49007, USA  
FEATURES Location/Qualifiers  
source 1..2043  
/organism="Mus musculus"  
/mol\_type="mRNA"  
/db\_xref="taxon:10090"  
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/codon\_start=1  
/product="aspartyl protease 2"  
/protein\_id="AAFI7082.1"  
/db\_xref="GI:6561820"

/translation="MAPALHMLLWVGSMLEPAQCTHGLIRPLRSGLAPPLGLRLP  
KETDESSEPRGRGSFVENVDNRKSGGGQITVEVTGSPPTQTLNLVDTGSSNPAVG  
AAPHPRLRYTORQUSSTYRDLRKGVYVYTGKMGELGTDLVSLPHGPNTVRANI  
AAITPESDKRFINGSNMGILGLAYEIAAPDLSLEFPDGLVKQTHIPNI PSLQCGA  
GPIINQTEALASVSGSMIGIDHSLYTSGLWYTPPIRREMYEVLIVREINGQDLKM  
DCKENVYDSIVSGSTNLRLPKVPEAAVKSIIKAASSTKPPDGFMLGLOVCMQAG  
TTPWNI PPIVSLIGEVTNOSPRITLIPQOILRPEDVATSDQDCYKFAVSSSTGT  
VMGAVIMSGFYVFFDRAKRIRIPNAYSACHVDFRTYAVGFPVTDMECCGYNIPQT  
DESLTMTIAYVMAAICALFMLPLCMVCQMRCLRLRHQDDFADDSILK"

Alignment of: us-10-726-967a-1 x AF200346 ..  
Alignment segment 1/1: (+)  
Matching Quality: 77.00 Score: 94.8  
Length: 20  
Percent Similarity: 90.00 Total length: 20  
Total Percent Identity: 80.00  
Gaps: 0 Total Percent Identity: 80.00

Alignment:  
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
64 ACCATCTCGGCATCCGGCTGCCCTTCGCACGGCGCTGCAGGGCCACC 113  
38 OLeuGlyLeu 41  
114 CCTGGGCGCTG 123  
Sequence name: rgep2ndb:AX401989

Sequence documentation:  
LOCUS AX401989 2158 bp DNA linear PAT 06-JUN-2002  
DEFINITION Sequence 1665 from Patent WO0210453.  
ACCESSION AX401989  
VERSION AX401989.1 GI:21338169  
KEYWORDS  
SOURCE Rattus norvegicus (Norway rat)  
ORGANISM Rattus norvegicus  
REFERENCE Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Ratus.  
AUTHORS 1  
TITLE Mendrick, D., Porter, M.W., Johnson, K.R., Castle, A.L. and  
JOURNAL Elashoff, M.R.  
FEATURES Molecular toxicology modeling  
Patent: WO 0210453-A 1665 07-FEB-2002;  
Gene Logic, Inc. (US)  
FEATURES Location/Qualifiers  
source 1..2158  
/organism="Rattus norvegicus"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:10116"  
/note="EMBL/GenBank Accession No. NM\_019204"

Alignment of: us-10-726-967a-1 x AX401989 ..  
Alignment segment 1/1: (+)  
Matching Quality: 77.00 Score: 94.9  
Length: 20  
Percent Similarity: 90.00 Total length: 20  
Total Percent Identity: 80.00  
Gaps: 0 Total Percent Identity: 80.00

Alignment:  
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
64 ACCATCTCGGCATCCGGCTGCCCTTCGCACGGCGCTGCAGGGCCACC 540  
38 OLeuGlyLeu 41

|||||  
541 CCTGGCCTG

550

Sequence name: rge2ndb:AF190727

Sequence documentation:

LOCUS AF190727 2158 bp mRNA linear ROD 26-OCT-1999  
DEFINITION Rattus norvegicus beta-site APP cleaving enzyme (BACE) mRNA,  
complete cds.

ACCESSION AF190727 GI:6118542

VERSION AF190727.1  
KEYWORDS Rattus norvegicus (Norway rat)  
SOURCE Rattus norvegicus  
ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;  
Rattus.REFERENCE  
AUTHORS

1 (bases 1 to 2158)

Vassar, R., Bennett, B.D., Babu-Khan, S., Kahn, S., Mendiaz, E.A.,  
Denis, P., Teplow, D.B., Ross, S., Amarante, P., Loeb, R., Luo, Y.,  
Fisher, S., Fuller, J., Edenson, S., Lile, J., Jarosinski, M.A.,  
Biere, A.L., Curran, E., Burgess, T., Louis, J.C., Collins, F.,  
Treanor, J., Rogers, G. and Citron, M.  
Beta-secretase cleavage of Alzheimer's amyloid precursor protein by  
the transmembrane aspartic protease BACE

Science 286 (5440), 735-741 (1999)

JOURNAL  
MEDLINE  
PUBMED  
20002972  
10531052

2 (bases 1 to 2158)

Bennett, B.D., Vassar, R. and Citron, M.  
Direct Submission  
Submitted (29-SEP-1999) Neuroscience, Amgen Inc., One Amgen Center  
Dr., Thousand Oaks, CA 91320-1799, USA

Location/Qualifiers

FEATURES

1..2158

/organism="Rattus norvegicus"

/mol\_type="RNA"

/db\_xref="taxon:10116"

1..2158

/gene="Bace"

428..1933

/gene="Bace"

/codon\_start=1

/product="beta-site APP cleaving enzyme"

/protein\_id="AF04144.1"

/translation="MAPALRMLLMWGSGMLPAQGTGLGIRLPLRSLGAPPIGLRLP  
RETDEPEERGRGRSFEVMDNLRKSGQGYVEMTGSPPTNLIVDTSSNFAVG  
AAPPLHRYRORLSSTYDLRKSIVVPTQGWEGELGDTLSIPHGPNVRAVI  
AATBSDKPRINSNMGILGLAVETARPDDLPFSDISVYKOTHPNIFSLQCGA  
GFLPNOTBALASVGSNITIGIHSLYTGSLWTTPRRRTYEVIVRAVINDLKM  
DCKEYNDKSIIVSGTINLRPKKVFPAVKSIKASSTKPDGKFLGSLQVCMQNG  
TTPWNIPEVLSILMGVTNQSPRIITLPOQYRPEVDVTSDDCYKFAVSQSTGT  
VMGAVIMEGFYVDFRARKRIGFAVSACHVDFRPAVAGPVTADMEDCGYNIPT  
DESLMTIAVMAICAFMLPLCLMWQCQRCLRHQDDPADISLTK"Quality: 77.00  
Matching length: 20  
Total length: 96.1  
Matching Percent Similarity: 90.00  
Total Percent Identity: 80.00  
Total Percent Identity: 80.00  
Gaps: 0

Alignment:

22 ThrGlnHISGlyILearGleuProleuAgsrGlyleuGlyAlaPr 38

491 ACCCATCTCGGATCCGACTGCCCTTCGACGCGCTGGCAGGCGCACCC 540

38 OleuGlyLeu 41

541 CCTGGCCTG 550

Sequence name: rge2ndb:AF190726

Sequence documentation:

LOCUS AF190726 3880 bp mRNA linear ROD 27-JAN-2000

DEFINITION Mus musculus beta-site APP cleaving enzyme (Bace) mRNA, complete  
cds.

ACCESSION AF190726 GI:6760476

VERSION AF190726.2

KEYWORDS Mus musculus (house mouse)

SOURCE Mus musculus

ORGANISM Mus musculus (house mouse)

REFERENCE

AUTHORS

1 (bases 1 to 3880)

Vassar, R., Bennett, B.D., Babu-Khan, S., Kahn, S., Mendiaz, E.A.,  
Denis, P., Teplow, D.B., Ross, S., Amarante, P., Loeb, R., Luo, Y.,  
Fisher, S., Fuller, J., Edenson, S., Lile, J., Jarosinski, M.A.,  
Biere, A.L., Curran, E., Burgess, T., Louis, J.C., Collins, F.,  
Treanor, J., Rogers, G. and Citron, M.  
Beta-secretase cleavage of Alzheimer's amyloid precursor protein by  
the transmembrane aspartic protease BACE



RETDESEBERRGRSFVEMVDNLRGKSGCYVEMTSGSPOTLILVDGSSNPVAG  
AAHPRIHAYYOROLSTYVDLARKGVVPTTCKMTGELCTDLSVPHGPNVPRANI  
AAITTESDKFFINSNMEGIIIGLVAIARDDSLBEPFDSLVQTHIPNIFSLQCGA  
GPELNOTELASVGSNMIIGIDHSILYGLMTWPIRREMYEVILVREINQDLKM  
DCREYNDKSIDVSGSTNLRLPKVFEAAVKSIIKASSTKSPDGMGLGQWQAG  
TTPMNIPEVSLIMGEVTSFRITLIPQVLRPEVDVATISODDCKEFAVSSSTGT  
VMGAVMEGEYVDFDARRKIRIPFASACHVDHPRRAVAGPVTYMDMECGYNIQGT  
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Alignment of: us-10-726-967a-1 x BC048189 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	96.1
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPro 38  
489 ACCCATCTCGGATCGGCGCTGCCCTCGCAGCGGCGCTGGCAGGGCCACC 538

38 oLeuGlyLeu 41  
539 CCTGGGCGCTG 548

Sequence name: rgep2ndb:AR404203

Sequence documentation:

LOCUS AR404203 2348 bp DNA linear PAT 18-DEC-2003  
DEFINITION Sequence 42 from patent US 6627739.  
ACCESSION AR404203  
VERSION AR404203.1 GI:40152243  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 2348)  
ANDERSON,J.P., Basi,G., Doan,M.T., Frigon,N., John,V., Power,M.,  
Sinha,S., Tatsuno,G., Tung,J., Wang,S. and McConlogue,L.  
TITLE beta-secretase enzyme compositions and methods  
JOURNAL Patent: US 6627739-A 42 30-SEP-2003;  
FEATURES Location/Qualifiers  
source 1..2348  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR404203 ..

Alignment segment 1/1: (-)

Quality:	38.00	Score:	258
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 GlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPro 38  
89 GGGATCCGAGCCCGCTACATCGCAGCGGCGGCGCGCCT 48

Sequence name: rgep2ndb:AR404204

Sequence documentation:

LOCUS AR404204 2348 bp DNA linear PAT 18-DEC-2003  
DEFINITION Sequence 44 from patent US 6627739.  
ACCESSION AR404204  
VERSION AR404204.1 GI:40152244

KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 2348)  
ANDERSON,J.P., Basi,G., Doan,M.T., Frigon,N., John,V., Power,M.,  
Sinha,S., Tatsuno,G., Tung,J., Wang,S. and McConlogue,L.  
TITLE beta-secretase enzyme compositions and methods  
JOURNAL Patent: US 6627739-A 44 30-SEP-2003;  
FEATURES Location/Qualifiers  
source 1..2348  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR404204 ..

Alignment segment 1/1: (-)

Quality:	38.00	Score:	258
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 GlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPro 38  
89 GGGATCCGAGCCCGCTACATCGCAGCGGCGGCGCGCCT 48

Sequence name: rgep2ndb:BC036084

Sequence documentation:  
LOCUS BC036084 2174 bp mRNA linear PRI 30-JUN-2004  
DEFINITION Homo sapiens beta-size APP-cleaving enzyme 1, transcript variant a,  
mRNA (CDNA clone MGC:33762 IMAGE:5311572), complete cds.  
ACCESSION BC036084  
VERSION BC036084.1 GI:23273578  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens

REFERENCE 1 (bases 1 to 2174)  
Strausberg,R.L., Feingold,E.A., Grouse,L.H., Derge,J.G.,  
Klausner,R.D., Collins,F.S., Wagner,L., Schmeen,C.M., Schuler,G.D.,  
Altschul,S.F., Zeeberg,B., Buettow,K.H., Schaefer,C.F., Bhat,N.K.,  
Hopkins,R.F., Jordan,H., Moore,T., Max,S.I., Wang,J., Hsieh,F.,  
Datchenko,L., Matusina,K., Farmer,A.A., Rubin,G.M., Hong,L.,  
Stapleton,M., Soares,M.B., Bonaldo,M.F., Casavant,T.L.,  
Schetz,T.E., Brownstein,M.U., Uedlin,T.B., Toshiyuki,S.,  
Carninci,P., Prange,C., Raha,S.S., Loquellano,N.A., Peters,G.J.,  
Abramsen,R.D., Mullany,S.J., Bosak,S.A., McEwan,P.J.,  
McKernan,K.J., Malek,J.A., Gunaratne,P.H., Richards,S.,  
Worley,K.C., Hale,S., Garcia,A.M., Gay,L.J., Huijck,S.W.,  
Villalon,D.K., Muzny,D.M., Sodergren,E.J., Lu,X., Gibbs,R.A.,  
Fahy,J., Helton,E., Kettman,M., Madan,A., Rodriguez,S.,  
Sanchez,A., Whiting,M., Madan,A., Young,A.C., Shevchenko,Y.,  
Bouffard,G.G., Blakeley,R.W., Touchman,J.W., Green,E.D.,  
Dickson,M.C., Rodriguez,A.C., Grimwood,J., Schmitt,J., Myers,R.M.,  
Butterfield,Y.S., Krzywinski,M.I., Skalsky,U., Smalhus,D.E.,  
Schnerch,A., Schein,J.E., Jones,S.J. and Marra,M.A.

Generation and initial analysis of more than 15,000 full-length  
human and mouse cDNA sequences  
Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)  
JOURNAL 12477932  
TITLE 2 (bases 1 to 2174)  
AUTHORS Strausberg,R.  
REFERENCE Direct Submission  
Submitted (31-JUN-2002) National Institutes of Health, Mammalian  
Gene Collection (MGC), Cancer Genomics Office, National Cancer  
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,  
USA





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/db\_xref="taxon:9606"  
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/gene="BACE"  
454..1959  
/gene="BACE"

/product="beta-site APP cleaving enzyme"  
/protein\_id="AA04142.1"  
/db\_xref="GI:6118539"  
/translation="MAQALPMLLMGAGVLPAGHTQHGIRLPRLSGAGAPLRLP  
RETDEBERGRGSFVEMVDNRKSGGQYVEMTVGSPPQTLNLVDTGSSNFAVG  
AAPHPLHRYORQLSTYRDLRGVVPYPTQKGEGELDTLVS1PHGNVYVRANI  
AATBESDKPTINSNMGGITGLAYAIARPDDEPFPSLYQTHVNPFSIQCGA  
GFLNDSVLAIVSGSMITIGIDHSLYTGLWTPIRREYVIVIRVINGQDLK  
DCEKYNDKSIIVDSGTNRLPKRVEAAVKS1KAASSTKFPDGFMLGQLVCMQMG  
TTPWNIFFPVISLYLMEVTVNQSFRITLIPQYLRPVEDVATSDDDCYKPAISOSTGT  
VMGAVIMEGYVVDPRARKRIGFVAVSACHVDEFRPAVAGPFTLDMEDCGYNIPOT  
DESTLMTIAYVMAICALFPLPLCLMVCQMRCLRCRQHQHDPADIDSLLK"

Alignment of: us-10-726-967a-1 x AP190725 ..

Alignment segment 1/1: (-)

Matching Percent	Similarity	Length	Score
64.29	64.29	14	271
Total	Percent Similarity	64.29	Total length: 57.14
Gaps:	0	Total Percent Identity	57.14

Alignment:

25 Gly11eArqLeuProLeuArqSerqLeuGlyGlyAlaPro 38  
237 GGAGTCCGAGACCCGCTACATCGACGCGGCGGCGACCT 196

Sequence name: rgep2ndb:BC065492

Sequence documentation:

LOCUS BC065492 3893 bp mRNA linear PRI 30-JUN-2004  
DEFINITION Homo sapiens beta-site APP-cleaving enzyme 1, transcript variant a,  
mRNA (CDNA clone MGC:71162 IMAGE:6538154), complete cds.  
BC065492

ACCESSION BC065492.1 GI:41350853

KEYWORDS MGC.

SOURCE Homo sapiens (human)

ORGANISM

REFERENCE

AUTHORS

1 (bases 1 to 3893)  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,  
Klausner, R.D., Collins, F.S., Wagner, L., Shennan, C.M., Schuler, G.D.,  
Altschul, S.F., Zeeberg, B., Buettow, K.H., Schaefer, C.F., Bhat, N.K.,  
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Heide, F.,  
Datchenko, L., Marsina, K., Farmer, A.A., Rubin, G.M., Hong, L.,  
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,  
Scheetz, T.E., Brownstein, M.J., Ustin, T.B., Toshiyuki, S.,  
Carninci, P., Prange, C., Raja, S.S., Loquellano, N.A., Peters, G.J.,  
Abramson, R.D., Mullaly, S.J., Bosak, S.A., McEwan, P.J.,  
Morken, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,  
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,  
Villalon, D.R., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,  
Fahy, J., Helton, E., Kettelman, M., Madan, A., Rodriguez, S.,  
Sanchez, A., Whitting, M., Madan, A., Young, A.C., Shevchenko, Y.,  
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,  
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,  
Butterfield, Y.S., Krzywicki, M.I., Skalska, U., Smalls, D.E.,  
Schnerch, A., Schein, J.E., Jones, S.U. and Marr, M.A.

Generation and initial analysis of more than 15,000 full-length  
human and mouse cDNA sequences

JOURNAL PUBMED 12477932

2 (bases 1 to 3893)

Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)

12477932

2 (bases 1 to 3893)

12477932

12477932

12477932

12477932

12477932

12477932

AUTHORS Strausberg, R.  
TITLE Direct Submission  
JOURNAL Submitted (26-JAN-2004) National Institutes of Health, Mammalian  
Gene Collection (MGC), Cancer Genomics Office, National Cancer  
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,  
USA

REMARK

COMMENT

NIH-MGC Project URL: <http://mgc.ncl.nih.gov>  
Contact: MGC help desk  
Email: [cgaps-f@mail.nih.gov](mailto:cgaps-f@mail.nih.gov)  
Tissue Procurement: ATCC  
DNA Library Preparation: Rubin Laboratory  
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LNL)  
DNA Sequencing by: National Institutes of Health Intramural  
Sequencing Center (NISC),  
Gaithersburg, Maryland;  
Web site: <http://www.nisc.nih.gov/>  
Contact: [nisc\\_mgc@hgrl.nih.gov](mailto:nisc_mgc@hgrl.nih.gov)  
Ahter, N., Aylet, K., Beckstrom-Stenberg, S.M., Benjamin, B.,  
Blakesley, R.W., Bouffard, G.G., Breen, K., Brinkley, C., Brooks, S.,  
Dietrich, N.L., Granite, S., Guan, X., Gupta, J., Haghighi, P.,  
Hansen, N., Ho, S.-L., Karlins, E., Kwong, P., Laric, P., Legaspi, R.,  
Maduro, Q.L., Mastello, C., Maskeri, B., Mastrian, S.D., McCloskey, J.C.,  
McDowell, J., Pearson, R., Stantrop, S., Thomas, P.J., Touchman, J.W.,  
Teague, C., Vogt, J.L., Walker, M.A., Wetherby, K.D., Wiggins, L.,  
Young, A., Zhang, L.-H. and Green, E.D.

FEATURES

Source

gene

CDS

1..3893  
/organism="Homo sapiens"  
/mol\_type="mRNA"  
/db\_xref="taxon:9606"  
/clone="MGC:71162 IMAGE:6538154"  
/cissue\_type="Lung, epidermoid carcinoma"  
/clone\_id="NIH\_MGC\_101"  
/lab\_host="DH10B"  
/note="Vector: POTB7"  
1..3893  
/gene="BACE1"  
/note="synonyms: ASP2, HSPC104, KIAA1149, BACE"  
/db\_xref="LocusID:23621"  
/db\_xref="MIM:604252"  
462..1967  
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/codon\_start=1  
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preproprotein"  
/protein\_id="AAH65492.1"  
/db\_xref="GI:41350854"  
/db\_xref="LocusID:23621"  
/db\_xref="MIM:604252"  
/translation="MAQALPMLLMGAGVLPAGHTQHGIRLPRLSGAGAPLRLP  
RETDEBERGRGSFVEMVDNRKSGGQYVEMTVGSPPQTLNLVDTGSSNFAVG  
AAPHPLHRYORQLSTYRDLRGVVPYPTQKGEGELDTLVS1PHGNVYVRANI  
AATBESDKPTINSNMGGITGLAYAIARPDDEPFPSLYQTHVNPFSIQCGA  
GFLNDSVLAIVSGSMITIGIDHSLYTGLWTPIRREYVIVIRVINGQDLK  
DCEKYNDKSIIVDSGTNRLPKRVEAAVKS1KAASSTKFPDGFMLGQLVCMQMG  
TTPWNIFFPVISLYLMEVTVNQSFRITLIPQYLRPVEDVATSDDDCYKPAISOSTGT  
VMGAVIMEGYVVDPRARKRIGFVAVSACHVDEFRPAVAGPFTLDMEDCGYNIPOT  
DESTLMTIAYVMAICALFPLPLCLMVCQMRCLRCRQHQHDPADIDSLLK"

Alignment of: us-10-726-967a-1 x BC065492 ..

Alignment segment 1/1: (-)

Matching Length	Quality	Score
64.29	64.29	272
Total	Percent Similarity	64.29
Total	Percent Identity	57.14

Gaps: 0

## Alignment:

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25 G|Y|I|E|A|T|G|L|E|U|P|R|O|L|E|U|A|G|S|E|R|G|Y|L|E|U|G|I|Y|A|L|A|P|R|O
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
245 GGGATCCGGAGCCCGCTACATCGGCACGGCGCGCCAGCCT 38
204
```

Sequence name: rgep2ndb:CQ824594

## Sequence documentation:

LOCUS CQ824594 5625 bp RNA linear PAT 21-JUN-2004  
DEFINITION Sequence 21 from Patent WO2004047872.  
ACCESSION CQ824594  
VERSION CQ824594.1 GI:49021634  
KEYWORDS  
SOURCE  
ORGANISM Homo sapiens (human)  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

## REFERENCE

1 Kaemmerer, W. F.  
TITLE Treatment of neurodegenerative disease through intracranial  
JOURNAL delivery of sirna  
Patent: WO 2004047872-A 21 10-JUN-2004;  
Medtronic, Inc. (US)

## FEATURES

source location/Qualifiers  
1..5625  
/organism="Homo sapiens"  
/mol\_type="unassigned RNA"  
/db\_xref="taxon:9606"  
1..5625  
/note="LOCUS BACE 5625 bp mRNA linear P RI 05-NOV-2002  
DEFINITION Homo sapiens beta-site APP-cleaving enzyme  
(BACE), tr anscritp variant d, mRNA. ACCESSION NM\_138973;  
VERSION NM\_138973.1 GI:21040367"

Alignment of: us-10-726-967a-1 x CQ824594 ..

## Alignment segment 1/1: (-)

	Quality:	35.00	Score:	273
Matching length:	14			
Matching Percent Similarity:	64.29		Total length:	14
Total Percent Similarity:	64.29		Matching Percent Identity:	57.14
Gaps:	0		Total Percent Identity:	57.14

## Alignment:

```
25 G|Y|I|E|A|T|G|L|E|U|P|R|O|L|E|U|A|G|S|E|R|G|Y|L|E|U|G|I|Y|A|L|A|P|R|O
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
230 GGGATCCGGAGCCCGCTACATCGGCACGGCGCGCCAGCCT 38
189
```

Sequence name: rgep2ndb:CQ824593

## Sequence documentation:

LOCUS CQ824593 5700 bp RNA linear PAT 21-JUN-2004  
DEFINITION Sequence 20 from Patent WO2004047872.  
ACCESSION CQ824593  
VERSION CQ824593.1 GI:49021630  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

## REFERENCE

1 Kaemmerer, W. F.  
TITLE Treatment of neurodegenerative disease through intracranial  
JOURNAL delivery of sirna  
Patent: WO 2004047872-A 20 10-JUN-2004;  
Medtronic, Inc. (US)

## FEATURES

source location/Qualifiers  
1..5700

/organism="Homo sapiens"

/mol\_type="unassigned RNA"

/db\_xref="taxon:9606"

## misc\_feature

1..5700  
/note="LOCUS BACE 5700 bp mRNA linear P RI 21-JUN-2002  
DEFINITION Homo sapiens beta-site APP-cleaving enzyme  
(BACE), tr anscritp variant c, mRNA. ACCESSION NM\_138971;  
VERSION NM\_138971.1 GI:21040363"

Alignment of: us-10-726-967a-1 x CQ824593 ..

## Alignment segment 1/1: (-)

	Quality:	35.00	Score:	273
Matching length:	14			
Matching Percent Similarity:	64.29		Total length:	14
Total Percent Similarity:	64.29		Matching Percent Identity:	57.14
Gaps:	0		Total Percent Identity:	57.14

## Alignment:

```
25 G|Y|I|E|A|T|G|L|E|U|P|R|O|L|E|U|A|G|S|E|R|G|Y|L|E|U|G|I|Y|A|L|A|P|R|O
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
230 GGGATCCGGAGCCCGCTACATCGGCACGGCGCGCCAGCCT 38
189
```

Sequence name: rgep2ndb:CQ824592

## Sequence documentation:

LOCUS CQ824592 5757 bp RNA linear PAT 21-JUN-2004  
DEFINITION Sequence 19 from Patent WO2004047872.  
ACCESSION CQ824592  
VERSION CQ824592.1 GI:49021628  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

## REFERENCE

1 Kaemmerer, W. F.  
TITLE Treatment of neurodegenerative disease through intracranial  
JOURNAL delivery of sirna  
Patent: WO 2004047872-A 19 10-JUN-2004;  
Medtronic, Inc. (US)

## FEATURES

source location/Qualifiers  
1..5757  
/organism="Homo sapiens"  
/mol\_type="unassigned RNA"  
/db\_xref="taxon:9606"  
1..5757  
/note="LOCUS BACE 5757 bp mRNA linear P RI 05-NOV-2002  
DEFINITION Homo sapiens beta-site APP-cleaving enzyme  
(BACE), tr anscritp variant b, mRNA. ACCESSION NM\_138972;  
VERSION NM\_138972.1 GI:21040365"

Alignment of: us-10-726-967a-1 x CQ824592 ..

## Alignment segment 1/1: (-)

	Quality:	35.00	Score:	273
Matching length:	14			
Matching Percent Similarity:	64.29		Total length:	14
Total Percent Similarity:	64.29		Matching Percent Identity:	57.14
Gaps:	0		Total Percent Identity:	57.14

## Alignment:

```
25 G|Y|I|E|A|T|G|L|E|U|P|R|O|L|E|U|A|G|S|E|R|G|Y|L|E|U|G|I|Y|A|L|A|P|R|O
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
230 GGGATCCGGAGCCCGCTACATCGGCACGGCGCGCCAGCCT 38
189
```

Sequence name: rgep2ndb:AX364933

## Sequence documentation:

```

LOCUS       AX364933                     5757 bp    DNA    linear    PAT 15-FEB-2002
DEFINITION  AX364933  84 from Patent WO0206315.
ACCESSION   AX364933
VERSION     AX364933.1  GI:18696823
KEYWORDS
SOURCE      Homo sapiens (human)
ORGANISM    Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1
  AUTHORS   Mintz,L., Freilich,S. and Bernstein,J.
  TITLE     Novel nucleic acid and amino acid sequences
  JOURNAL   Patent: WO 0206315-A 84 24-JAN-2002;
            Compugen Ltd.(IL)
FEATURES             Location/Qualifiers
     source          1..5757
                     /organism="Homo sapiens"
                     /mol_type="unassigned DNA"
                     /db_xref="taxon:9606"
Alignment of: us-10-726-967a-1 x AX364933    ..
Alignment segment 1/1: (-)
      Quality:      35.00                      EScore:      273
      Matching length: 14                      Total length: 14
      Matching Percent Similarity: 64.29          Matching Percent Identity: 57.14
      Total Percent Similarity: 64.29            Total Percent Identity: 57.14
      Gaps:                                0
Alignment:
      25 GIYIIeArgLeuProLeuArgSerGlyLeuGlyAlaPro          38
      |||||  |||||  |||||  |||||  |||||  |||||  |||||
      238 GGGATCCGAGGCCCGCTACATCGGCACGGGGCGGCGACGCT        197
Sequence name: rsep2ndb.AB032975

Sequence documentation:
LOCUS       AB032975                     5814 bp    mRNA    linear    PRI 17-MAY-2001
DEFINITION  Homo sapiens mRNA for KIAA1149 protein, partial cde.
ACCESSION   AB032975
VERSION     AB032975.2  GI:14133242
KEYWORDS
SOURCE      Homo sapiens (human)
ORGANISM    Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1 (bases)
  AUTHORS   Hirosewa,M., Nagase,T., Ishikawa,K., Kikuno,R., Nomura,N. and
            Ohara,O.
  TITLE     Characterization of cDNA clones selected by the Genemark analysis
            from size-fractionated cDNA libraries from human brain
  JOURNAL   DNA Res. 6 (5), 329-336 (1999)
MEDLINE     20039618
PUBMED      10574461
     2 (bases 1 to 5814)
     Ohara,O., Nagase,T. and Kikuno,R.
     Direct Submission
     Submitted (04-OCT-1999) Osamu Ohara, Kazusa DNA Research Institute,
     Laboratory of DNA Technology; 1532-3 Yana, Kisarazu, Chiba
     292-0812, Japan (E-mail:cdna1f@okazusa.or.jp,
     URL:http://www.kazusa.or.jp/huge/, Tel:+81-438-52-3913,
     Fax:+81-438-52-3914)
     On May 17, 2001 this sequence version replaced gi:6330044.
COMMENT
FEATURES
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                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="fg04087"
                     /sex="male"
                     /tissue_type="brain"

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gene  
CDS

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/dev\_sflag="adultc"  
/note="Vector:pbLuescriptII SK plus. This sequence is replaced that of hg01289 cDNA as a representative cDNA sequence for KIAA1149"  
1..5814  
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<351..1949  
/gene="KIAA1149"  
/note="Start codon is not identified."  
/codon\_start=1  
/product="KIAA1149 protein"  
/protein\_id="BAB66463.2"  
/db\_xref="GI:14133243"  
/translation="EATSTQTGWQAPETDVGQCEPRGSGRPPMPKPCFGSCCGWNA  
RECELPAPSTASGCPCAAAGAPLGLRLPRETDEBEPBGRGSFVEMVDNLKGSK  
GOGYVEMTVGSPQTLNLIADVTSSNFAVGAHPFLHRYQQLSTYDRLKGVVAE  
VPYQVKGWEGELGTDVLSIPHGPVTVRANIALITSEPKFINSNMEGILGLVAE  
ARPDSLEPRPFDLSLVKQTHVNLFSLLQCGAPFINSSEVLAASVGSMLGGIDHSLS  
TGSILMTPIRRETYEYIVRAVENGDLRKDCENYDKSYDSGTTNMLPKPVFF  
LAQVSRIVASSTERKPDGPFMLGEQLVGMQAGTTFWNIFFPVLSLYMGVTVQSFRTIT  
LPQOYLRLPDEVDVATSDQCYKFAISQSTGVMAVIMEGYVVEDRARKRIGVASS  
CHVDERTRIAVEGPFVTLLMEDCGYNI PQIDESLTMTIAYVMAI CALFMLPCLMW  
CQWRCLRCLRQHDDFADDSLILK"

Alignment of: us-10-726-967a-1 x AB032975 ..

Alignment segment 1/1: (-)

Matching Length:	35..00	Score:	273
Matching Percent	14	Total length:	14
Similarity:	64..29	Identity:	57..14
Total Similarity:	64..29	Total Identity:	57..14
Gaps:	0		

Alignment:

25 GYITLARGLEUPROLEUARGSERGYLEUGLYGYALAPRO 38  
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226 GGGATCCGAGCCCGCTACATCGGACGCGGGCGCACGCT 185

Sequence name: rgep2ndb:CQ824591

Sequence documentation:

LOCUS	5832 bp	RNA	linear	PAT 21-JUN-2004
DEFINITION	Sequence 18 from Patent WO2004047872.			
ACCESSION	CQ824591			
VERSION	CQ824591.1	GI:49021626		
KEYWORDS				
SOURCE				
ORGANISM	Homo sapiens (human)			
	Homo sapiens			
	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
	Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.			
REFERENCE				
AUTHORS	Kaemmerer,W.P.			
TITLE	Treatment of neurodegenerative disease through intracranial			
JOURNAL	delivery of siRNA			
	Patent: WO 2004047872-A 18 10-JUN-2004;			
FEATURES	Medtronic, Inc. (US)			
source	Location/Qualifiers			
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	/organism="Homo sapiens"			
	/mol_type="unassigned RNA"			
	/db_xref="taxon:9606"			
misc_feature	1..5832			
	/note="ACCESSION NM_012104 VERSION NM_012104.2 GI:210403659			
	LOCUS BACB 5832 bp mRNA linear PRI 05-NOV-2002 DEFINITION			
	Homo sapiens beta-site APP-cleaving enzyme (BACE), tr			
	anscript variant a, mRNA."			

Alignment of: us-10-726-967a-1 x CQ824591 ..

Alignment segment 1/1: (-)

Quality: 35.00      BScore: 273  
 Matching length: 14      Total length: 14  
 Matching Percent Similarity: 64.29      Matching Percent Identity: 57.14  
 Total Percent Similarity: 64.29      Total Percent Identity: 57.14  
 Gaps: 0

Alignment:

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25 G1Y11leaRgLeuProLeuArgSerGlyLeuGlyAlaPro      38
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
230 GGATCCGAGCCCGCTACATCGCAGCGCGCGCCAGCCT      189

```

Sequence name: rgep2ndb:CQ726974

Sequence documentation:

LOCUS CQ726974 5842 bp DNA linear PAT 03-FEB-2004  
 DEFINITION Sequence 12908 from Patent WO02068579.  
 ACCESSION CQ726974  
 VERSION CQ726974.1 GI:42291589

KEYWORDS

SOURCE Homo sapiens (human)  
 ORGANISM Homo sapiens

REFERENCE 1 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

AUTHORS Venter, C.J., Adams, M.C., Li, P.W. and Myers, E.W.

TITLE Kites, such as nucleic acid arrays, comprising a majority of humanecons or transcripts, for detecting expression and other uses thereof

JOURNAL Patent: WO 02068579-A 12908 06-SEP-2002;  
 PE Corporation (NY) (US)

FEATURES

source Location/Qualifiers  
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 /organism="Homo sapiens"  
 /mol\_type="unassigned DNA"  
 /db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x CQ726974 ..

Alignment segment 1/1: (-)

Quality: 35.00      BScore: 273  
 Matching length: 14      Total length: 14  
 Matching Percent Similarity: 64.29      Matching Percent Identity: 57.14  
 Total Percent Similarity: 64.29      Total Percent Identity: 57.14  
 Gaps: 0

Alignment:

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25 G1Y11leaRgLeuProLeuArgSerGlyLeuGlyAlaPro      38
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
235 GGATCCGAGCCCGCTACATCGCAGCGCGCGCCAGCCT      194

```

Sequence name: rgep2ndb:AF201468

Sequence documentation:

LOCUS AF201468 5878 bp mRNA linear PRI 19-DEC-1999  
 DEFINITION Homo sapiens ADP beta-secretase mRNA, complete cds.  
 ACCESSION AF201468  
 VERSION AF201468.1 GI:6601444

KEYWORDS

SOURCE Homo sapiens (human)  
 ORGANISM Homo sapiens

REFERENCE 1 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

AUTHORS Sinha, S., Anderson, J.P., Barbour, R., Basi, G.S., Caccavello, R., Davis, D., Doan, M., Dovey, H.F., Frigon, N., Hong, J., Jacobson-Crask, K., Jewett, N., Keim, P., Knops, J., Lieberburg, I., Power, M., Tan, H., Tatsuno, G., Tung, J., Schenk, D., Seubert, P., Suomensaari, S., Wang, S., Walker, D., Zhao, J., McConlogue, L. and John, V.

TITLE Purification and cloning of amyloid precursor protein

JOURNAL beta-secretase from human brain  
 MEDLINE Nature 402 (6761), 537-540 (1999)  
 PUBMED 20057171  
 REFERENCE 10591214

REFERENCE 2 (bases 1 to 5878)

AUTHORS Basi, G.S., Power, M.D., Wang, S., Tatsuno, G., Frigon, N., Doan, M., Hong, G., Keim, P., Anderson, J., Sinha, S. and McConlogue, L.M.

TITLE Direct Submission  
 JOURNAL Submitted (03-NOV-1999) Gene Expression Group, Elan Pharmaceuticals, Inc., 800 Gateway Blvd., S. San Francisco, CA 94080, USA

FEATURES

source Location/Qualifiers  
 1..5878  
 /organism="Homo sapiens"  
 /mol\_type="mRNA"  
 /db\_xref="taxon:9606"  
 /chromosome="11"  
 /map="D11S432"  
 /tissue\_type="brain"  
 455..1560  
 /function="cleaves APP at the beta-cleavage site"  
 /note="membrane type aspartyl protease"  
 /product="APP beta-secretase"  
 /codon\_start=1  
 /protein\_id="AAPI8982.1"  
 /db\_xref="GI:6601445"  
 /translation="MAQALPMLLMGAGVLPAGTQHCIRLPPLSSGLGAPLGRLP  
 RTDDEPSPGRSGFVEVDLNRKSGCYIVENTVSPQTLILVDTGSSNFAVG  
 AAPHPFLHRYQRLSTYRDLRKGVVYPTQKMEGLGTDLSVIPGPNVYRANI  
 AAITSDKPFINGSMGIIGLAVAEIARPDLSLRFPSLVKQTHVPLFSLQCGA  
 GFLNOSVTLASVGGSMIIGIDHSLYGSILYTPPIREMYEVIIVRVEINGDLKM  
 DKEYNVYKSIYDSGTNNLRPKYFEAVASIKKASSTKPPDGMIGEOLVCMQAG  
 TTPNATIPYISLYLMGEVTNGSFRTITLIPQQLRLRVEDVATSGDDCYKFAISQSTGT  
 VNGAVIMGEFVYVDFRARRIGFAVSACHDHFRTAAVEGPFVLDMEDCGYNIPQT  
 DSTMTIATYVVAALCALFMLPLCLMVCQMRCLRLRQHDHDFADISILK"

CDS

Alignment of: us-10-726-967a-1 x AF201468 ..

Alignment segment 1/1: (-)

Quality: 35.00      BScore: 273  
 Matching length: 14      Total length: 14  
 Matching Percent Similarity: 64.29      Matching Percent Identity: 57.14  
 Total Percent Similarity: 64.29      Total Percent Identity: 57.14  
 Gaps: 0

Alignment:

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25 G1Y11leaRgLeuProLeuArgSerGlyLeuGlyAlaPro      38
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
238 GGATCCGAGCCCGCTACATCGCAGCGCGCGCCAGCCT      197

```

Sequence name: rgep2ndb:AR404205

Sequence documentation:

LOCUS AR404205 16080 bp DNA linear PAT 18-DEC-2003  
 DEFINITION Sequence 48 from patent US 6627739.  
 ACCESSION AR404205  
 VERSION AR404205.1 GI:40152245

KEYWORDS

SOURCE Unknown.  
 ORGANISM Unknown.

REFERENCE 1 Unclassified.  
 JOURNAL (bases 1 to 16080)

AUTHORS Anderson, J.P., Basi, G., Doan, M.T., Frigon, N., John, V., Power, M., Sinha, S., Tatsuno, G., Tung, J., Wang, S. and McConlogue, L.

TITLE beta-secretase enzyme compositions and methods  
 JOURNAL Patent: US 6627739-A 48 30-SEP-2003;  
 FEATURES Location/Qualifiers

FEATURES

source 1..16080  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR404205 ..

Alignment segment 1/1: (-)

Quality:	35.00	Score:	275
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14

Alignment:

```

25 G1Y1IleAArgLeuProLeuArgSerGlyLeuGlyAlaPro
1458 GGGATCCGAGACCCGCTACATCGGACGCGGCGGCGACCT
                                     38
                                     1417

```

Sequence name: rgep2ndb:AX401989

Sequence documentation:

LOCUS AX401989 2158 bp DNA linear PAT 06-JUN-2002  
 DEFINITION Sequence 1665 from Patent WO0210453.  
 ACCESSION AX401989  
 VERSION AX401989.1 GI:21338169  
 KEYWORDS  
 SOURCE Rattus norvegicus (Norway rat)  
 ORGANISM Rattus norvegicus  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;  
 Rattus.

REFERENCE  
 1 Mendrick, D., Porter, M.W., Johnson, K.R., Castle, A.L. and  
 Elashoff, M.R.  
 TITLE Molecular toxicology modeling  
 JOURNAL Patent: WO 0210453-A 1665 07-FEB-2002;  
 Gene Logic, Inc. (US)  
 FEATURES  
 source 1. 2158  
 /organism="Rattus norvegicus"  
 /mol\_type="unassigned DNA"  
 /db\_xref="taxon:10116"  
 /note="EMBL/GenBank Accession No. NM\_019204"

Alignment of: us-10-726-967a-1 x AX401989 ..

Alignment segment 1/1: (-)

Quality:	33.00	Score:	278
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	50.00
Total Percent Similarity:	64.29	Total Percent Identity:	50.00

Alignment:

```

23 G1nH1sg1y1leAArgLeuProLeuArgSerGlyLeuGlyGly
182 CAGCGGGGAGATCGGCGCCCTTGCGGGCTGAGAGGCGGG
                                     36
                                     141

```

Sequence name: rgep2ndb:AF190727

Sequence documentation:

LOCUS AF190727 2158 bp mRNA linear ROD 26-OCT-1999  
 DEFINITION Rattus norvegicus beta-site APP cleaving enzyme (Bace) mRNA,  
 complete cds.  
 ACCESSION AF190727  
 VERSION AF190727.1 GI:6118542  
 KEYWORDS  
 SOURCE Rattus norvegicus (Norway rat)  
 ORGANISM Rattus norvegicus  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;  
 Rattus.

REFERENCE  
 1 (bases 1 to 2158)

AUTHORS Vassar, R., Bennett, B.D., Babu-Khan, S., Kahn, S., Mendiaz, E.A.,  
 Denis, P., Teplow, D.B., Rose, S., Amaratne, P., Loebner, R., Luo, Y.,  
 Fisher, S., Fuller, J., Edenson, S., Lile, J., Jarosinski, M.A.,  
 Biere, A.L., Curran, E., Burgess, T., Louis, J.C., Collins, F.,  
 Treanor, J., Rogers, G., and Citron, M.  
 TITLE Beta-secretase cleavage of Alzheimer's amyloid precursor protein by  
 the transmembrane aspartic protease BACE  
 JOURNAL Science 286 (5440), 735-741 (1999)  
 MEDLINE 20002972  
 PUBMED 10531052

REFERENCE

2 (bases 1 to 2158)  
 AUTHORS Bennett, B.D., Vassar, R. and Citron, M.  
 TITLE Direct Submission  
 JOURNAL Submitted (29-SEP-1999) Neuroscience, Amgen Inc., One Amgen Center  
 Dr., Thousand Oaks, CA 91320-1799, USA  
 FEATURES  
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 Location/Qualifiers  
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 /mol\_type="mRNA"  
 /db\_xref="taxon:10116"  
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 TTPWNIPEVLSLMGEVTVNQSFRITLLEQYLRPVEDVATQDDCYKFAVQSSTGT  
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Alignment of: us-10-726-967a-1 x AF190727 ..

Alignment segment 1/1: (-)

Quality:	33.00	Score:	278
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Matching Percent Similarity:	64.29	Matching Percent Identity:	50.00
Total Percent Similarity:	64.29	Total Percent Identity:	50.00

Alignment:

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23 G1nH1sg1y1leAArgLeuProLeuArgSerGlyLeuGlyGly
182 CAGCGGGGAGATCGGCGCCCTTGCGGGCTGAGAGGCGGG
                                     36
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Sequence name: rgep2ndb:CQ824595

Sequence documentation:

LOCUS CQ824595 3880 bp RNA linear PAT 21-JUN-2004  
 DEFINITION Sequence 22 from Patent WO2004047872.  
 ACCESSION CQ824595  
 VERSION CQ824595.1 GI:49021641  
 KEYWORDS  
 SOURCE Mus musculus (house mouse)  
 ORGANISM Mus musculus  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.  
 REFERENCE  
 1 Kaemerer, W.F.  
 TITLE Treatment of neurodegenerative disease through intracranial  
 delivery of sirna  
 JOURNAL Patent: WO 2004047872-A 22 10-JUN-2004;  
 Medtronic, Inc. (US)

FEATURES  
source 1..3880 /organism="Mus musculus"  
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DEFINITION Mus musculus beta-site APP cleaving enzyme  
(Bace), MR NA. ACCESSION NM\_011792; VERSION NM\_011792.2  
GI:6857758"

Alignment of: us-10-726-967a-1 x CQ824595 ..  
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Quality: 33.00  
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Matching Percent Similarity: 64.29  
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Total Percent Identity: 50.00  
Gaps: 0

Sequence name: rgep2ndb:AF190726  
Sequence documentation: 3880 bp mRNA linear ROD 27-JAN-2000  
LOCUS AF190726 Mus musculus beta-site APP cleaving enzyme (Bace) mRNA, complete  
DEFINITION cds  
ACCESSION AF190726  
VERSION AF190726.2 GI:6760476  
KEYWORDS Mus musculus (house mouse)  
SOURCE  
ORGANISM  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.  
1 (bases 1 to 3880)  
Vasarr,B.D., Bennett,B.D., Babu-Khan,S., Kahn,S., Mendiaz,E.A.,  
Dentis,P., Teplow,D.B., Ross,S., Amarante,P., Loeffer,R., Luo,Y.,  
Fisher,S., Fuller,J., Edenson,S., Lile,J., Jarosinski,M.A.,  
Biere,A.L., Curran,E., Burgess,T., Louis,J.-C., Collins,F.,  
Treatnor,J., Rogers,G. and Citron,M.  
Beta-secretase cleavage of Alzheimer's amyloid precursor protein by  
the transmembrane aspartic protease BACE  
Science 286 (5440), 735-741 (1999)

TITLE  
JOURNAL  
MEDLINE  
PUBMED  
REFERENCE  
AUTHORS  
JOURNAL  
TITLES  
AUTHORS  
REMARK  
COMMENT  
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AAITSDKPEFLINGSNWEGILGLAYVAPDPDSLPFPDVKQTHINIFELQCGA  
GPRPLQTFALISVGSWMIIIGLIDHLYTSGSLMWTPTPIRREMYEVIIVVEINGDLK  
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TTPNAPFVYISLYLGEVYTNQSFRTTIPQOYLPRVEDVANSODDCYKPAVSSTGT  
VNGAVIMGEFVYVDFDRAKRIQFAVSACHVDFEFTAAVEGFTADMDGCTYNIPQT  
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Alignment of: us-10-726-967a-1 x AF190726 ..  
Alignment segment 1/1: (-)  
Quality: 33.00  
Matching length: 14  
Matching Percent Similarity: 64.29  
Total Percent Similarity: 64.29  
Total Percent Identity: 50.00  
Gaps: 0

Sequence name: rgep2ndb:BC048189  
Sequence documentation: 4059 bp mRNA linear ROD 30-JUN-2004  
LOCUS BC048189 Mus musculus beta-site APP cleaving enzyme 1, mRNA (cDNA clone  
MGC:61419 IMAGE:6831622), complete cds.  
ACCESSION BC048189  
VERSION BC048189.1 GI:29165766  
KEYWORDS MGC.  
SOURCE Mus musculus (house mouse)  
ORGANISM  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.  
1 (bases 1 to 4059)  
Strausberg,R.L., Feingold,E.A., Grouse,L.H., Derge,J.G.,  
Klausner,R.D., Collins,F.S., Wagner,L., Shemen,C.F., Bhat,N.K.,  
Altschul,S.F., Zeeberg,B., Buerger,K.H., Scheffer,C.F., Bhat,N.K.,  
Hopkins,R.F., Jordan,H., Moore,T., Max,S.I., Wang,J., Hsieh,F.,  
Diatchenko,L., Marusina,K., Farmer,A.A., Rubin,G.M., Hong,L.,  
Stapleton,M., Soares,M.B., Bonaldo,M.F., Cabavant,T.L.,  
Scheetz,T.E., Brownstein,M.J., Uedlin,T.B., Toshitoki,S.,  
Carinci,P., Prange,C., Rana,S.S., Loquellano,N.A., Peters,G.J.,  
Abramson,R.D., Mullah,J.S.J., Bosak,S.A., McEwan,P.J.,  
McKernan,K.J., Malek,J.A., Gunaratne,P.H., Richards,S.,  
Worley,K.C., Hale,S., Garcia,A.M., Gay,L.J., Hulyk,S.W.,  
Villalon,D.K., Muzny,D.M., Sodergren,E.J., Lu,X., Gibbs,R.A.,  
Fahy,J., Helton,E., Kettelman,M., Madan,A.C., Rodriguez,S.,  
Sanchez,A., Whiting,M., Madan,A., Young,A.C., Shevchenko,Y.,  
Bouffard,G.G., Blakesley,R.W., Touchman,J.W., Green,E.D.,  
Dickson,M.C., Rodriguez,A.C., Grimwood,J., Schmitz,J., Myers,R.M.,  
Butcherfield,S., Krzywinski,M.I., Skalska,U., Smallue,D.E.,  
Scherer,A., Schein,J.E., Jones,S.J., and Marra,M.A.  
Generation and initial analysis of more than 15,000 full-length  
human and mouse cDNA sequences  
Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)

TITLE  
JOURNAL  
PUBMED  
REFERENCE  
AUTHORS  
JOURNAL  
TITLES  
AUTHORS  
REMARK  
COMMENT  
FEATURES  
source  
2 (bases 1 to 4059)  
Strausberg,R.  
Direct Submission  
Submitted (06-MAR-2003) National Institutes of Health, Mammalian  
Gene Collection (MGC), Cancer Genomics Office, National Cancer  
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,  
USA  
NIH-MGC Project URL: <http://mgc.ncl.nih.gov>

## COMMENT

Contact: MGC help desk  
Email: gcgabs-remail.nih.gov  
Tissue Procurement: Dr. Jim Lin, University of Iowa  
cDNA Library Preparation: M. Bento Soares, University of Iowa  
DNA Sequencing by: The I.M.A.G.E. Consortium (ILNL)  
DNA Sequencing by: University of Iowa, Dr. M. Bento Soares and Dr. Thomas L. Casavant.  
Web site: <http://genome.uiowa.edu>  
Contact: bent-soares@uiowa.edu; tom-casavant@uiowa.edu  
Donald, M.F., Akabogu, I., Bait, T., Bait, U., Crouch, K., Davis, A., Fisher, K., Keppel, C., Kucaba, T., Lebeck, M., Melo, A., Schaefer, K., Scheetz, T., Smith, C., Smit, E., Tack, D., Trout, K., Walters, D., Casavant, T., Soares, M.B.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/ILNL at: <http://image.llnl.gov>  
Series: Plate: Row: Column: 0  
This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF analysis.

## FEATURES

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1. .4059  
Location/Qualifiers

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AATIESDKFINGSNMEGILGLAAEIAAPDDSLPEPDSLKVTIHPNIFSLQCGA  
GFLPNOTREALASVGSMTIGSDHSLYGLMTYPIRREMYEVIIVREINQDLMK  
DCKEYNDKSLVSGCTNLRLPKVFPAASIKAASTKFPDGFGLGOLVOMOG  
TTPNNTIPVLSLYMGEVNTQSFRTITLPPQYLRPVDVATSDDCIKFAVSQSTGT  
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## gene

## CDS

Alignment of: us-10-726-967a-1 x BC048189 ..

Alignment segment 1/1: (-)

Quality:	33.00	Escore:	280
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	50.00
Total Percent Similarity:	64.29	Total Percent Identity:	50.00
Gaps:	0		

## Alignment:

23 GlnHISGLYIleArgLeuProLeuArgSerGlyLeuGLYGLY  
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187 CAGCGGGGAGATCGGGCCCTTGTGGGCTGGAGGGGGGGG

36  
146

Sequence name: rgep2ndb:AB089958

Sequence documentation:

LOCUS AB089958 517 bp mRNA linear PRI 19-AUG-2003

## DEFINITION

Homo sapiens BACE mRNA for beta-site APP cleaving enzyme isoform I-127, complete cds.

ACCESSION AB089958  
VERSION AB089958.1 GI:34014375

KEYWORDS  
SOURCE  
ORGANISM

Homo sapiens (human)  
Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

## REFERENCE

1 Tanahashi, H.  
A novel alternatively spliced isoform of BACE, I-127 induced by cycloheximide treatment

## JOURNAL

2 (bases 1 to 517)  
Tanahashi, H.

## REFERENCE

Submitted (17-AUG-2002) Hiroshi Tanahashi, National Institute of Neuroscience, Division of Demyelinating Disease and Aging; 4-1-1 Ogawahigashi, Kodaira, Tokyo 187-8502, Japan  
(E-mail: tanahash@ncnp.go.jp, Tel: 81-042-341-2711 (ex. 5163), Fax: 81-042-346-1747)

## FEATURES

## source

1. .517  
Location/Qualifiers

/organism="Homo sapiens"  
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Alternative splicing of the RNA occurs at an internal donor in exon 3."  
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1. .384  
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Alignment of: us-10-726-967a-1 x AB089958 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	279
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Gaps:	0		

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27 ArgLeuProLeuArgSerGlyLeuGLYGLYALA  
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179 AAGTCGCCCTCGGCGGCGGCTCTCGGGCTCT

37  
147

Sequence name: rgep2ndb:AR224122

## Sequence documentation:

LOCUS AR224122 1287 bp DNA linear PAT 26-SEP-2002  
DEFINITION Sequence 50 from patent US 6440698.  
ACCESSION AR224122  
VERSION AR224122.1 GI:23332782

KEYWORDS  
SOURCE  
ORGANISM

Unknown.  
Unknown.  
Unclassified.

REFERENCE 1 (bases 1 to 1287)



AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
TITLE Yan,R. Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6440698-A 50 27-AUG-2002;  
FEATURES Location/Qualifiers  
source 1..1287  
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Alignment of: us-10-726-967a-1 x AR224122 ..

Alignment segment 1/1: (-)

Quality:	32.00	Total length:	281
Matching length:	11	Matching length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
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179 AAGCTGCCCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR269253

Sequence documentation:  
LOCUS AR269253 1287 bp DNA linear PAT 10-APR-2003  
DEFINITION Sequence 50 from patent US 650667.  
ACCESSION AR269253  
VERSION AR269253.1 GI:29700221  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1287)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
TITLE Yan,R. Aspartyl protease 2 (Asp2) antisense oligonucleotides  
JOURNAL Patent: US 650667-A 50 31-DEC-2002;  
FEATURES Location/Qualifiers  
source 1..1287  
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Alignment of: us-10-726-967a-1 x AR269253 ..

Alignment segment 1/1: (-)

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Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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Sequence name: rgep2ndb:AR478808

Sequence documentation:  
LOCUS AR478808 1287 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 50 from patent US 669671.  
ACCESSION AR478808  
VERSION AR478808.1 GI:47237528  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.

Unclassified.  
REFERENCE 1 (bases 1 to 1287)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
TITLE Yan,R. Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
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FEATURES Location/Qualifiers  
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Alignment of: us-10-726-967a-1 x AR478808 ..

Alignment segment 1/1: (-)

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Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
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179 AAGCTGCCCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR487374

Sequence documentation:  
LOCUS AR487374 1287 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 50 from patent US 6706485.  
ACCESSION AR487374  
VERSION AR487374.1 GI:47252472  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1287)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
TITLE Yan,R. Method of identifying agents that inhibit APP processing activity  
JOURNAL Patent: US 6706485-A 50 16-MAR-2004;  
FEATURES Location/Qualifiers  
source 1..1287  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487374 ..

Alignment segment 1/1: (-)

Quality:	32.00	Total length:	281
Matching length:	11	Matching length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
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179 AAGCTGCCCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR532014

Sequence documentation:  
LOCUS AR532014 1287 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 50 from patent US 6727074.  
ACCESSION AR532014  
VERSION AR532014.1 GI:53920548  
KEYWORDS



```

SOURCE          Unknown.
ORGANISM         Unknown.
REFERENCE        Unclassified.
AUTHORS           1 (bases 1 to 1287)
TITLE            Gunney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
                  Yan,R.
JOURNAL          Alzheimer's disease secretase, APP substrates therefor, and uses
FEATURES         Patent: US 6727074-A 50 27-APR-2004;
                  Location/Qualifiers
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Alignment of: us-10-726-967a-1 x ARS32014 ..

Alignment segment 1/1: (-)

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Matching length:    11                        Total length:  11
Matching Percent Similarity: 81.82              Matching Percent Identity: 54.55
Total Percent Similarity: 81.82                Total Percent Identity: 54.55
Gaps:                                0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGIyGIyAla      37
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179 AAGCTGCCCTCCGGCGCGGACTCCTCGGCTCT      147

Sequence name: rgep2ndb:ARS40915

Sequence documentation:
LOCUS           ARS40915                   1287 bp          DNA          linear          PAT 08-OCT-2004
DEFINITION      Sequence 50 from patent US 6737510.
ACCESSION       ARS40915
VERSION         ARS40915.1   GI:53932428
KEYWORDS
SOURCE          Unknown.
ORGANISM         Unknown.
REFERENCE        Unclassified.
AUTHORS           1 (bases 1 to 1287)
TITLE            Gunney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
                  Yan,R.
JOURNAL          Alzheimer's disease secretase, APP substrates therefor, and uses
FEATURES         Patent: US 6737510-A 50 18-MAY-2004;
                  Location/Qualifiers
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                                          /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x ARS40915 ..

Alignment segment 1/1: (-)

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Matching Percent Similarity: 81.82              Matching Percent Identity: 54.55
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Gaps:                                0

Alignment:
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179 AAGCTGCCCTCCGGCGCGGACTCCTCGGCTCT      147

Sequence name: rgep2ndb:ARS60125

Sequence documentation:
LOCUS           ARS60125                   1287 bp          DNA          linear          PAT 08-OCT-2004
DEFINITION      Sequence 50 from patent US 6753163.

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ACCESSION      AR560125
VERSION        AR560125.1  GI:53970492
KEYWORDS
SOURCE
ORGANISM       Unknown.
                Unclassified.
REFERENCE      1 (bases 1 to 1287)
AUTHORS        Guney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and
                Yan,R.
TITLE          Alzheimer's disease secretase, APP substrates therefor, and uses
                therefor
JOURNAL        Patent: US 6753163-A 50 22-JUN-2004;
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source         Location/Qualifiers
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                /organism="unknown"
                /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560125 ..
Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 281
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
   ::::::::::::::|||:::
179 AAGCTGCCCCCTCCGGCCGGGCTCTCCGGGCTCT

Sequence name: rsep2ndb:AX105432
Sequence documentation:
LOCUS          AX105432          1287 bp          DNA          linear          PAT 30-APR-2001
DEFINITION     Sequence 50 from Patent WO0123533.
ACCESSION      AX105432
VERSION        AX105432.1  GI:13921541
KEYWORDS
SOURCE
ORGANISM       synthetic construct
                other sequences; artificial sequences.
REFERENCE      1
AUTHORS        Guney,M. and Bienkowski,M.J.
TITLE          Alzheimer's disease secretase, app substrates therefor, and uses
                therefor
JOURNAL        Patent: WO 0123533-A 50 05-APR-2001;
                Pharmacia & Upjohn Company (US)
FEATURES
source         Location/Qualifiers
                1..1287
                /organism="synthetic construct"
                /mol_type="unassigned DNA"
                /db_xref="taxon:32630"
                /note="Hu-Asp2(b) delta TM"

Alignment of: us-10-726-967a-1 x AX105432 ..
Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 281
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
   ::::::::::::::|||:::
179 AAGCTGCCCCCTCCGGCCGGGCTCTCCGGGCTCT

Sequence name: rsep2ndb:AX105432
Sequence documentation:
LOCUS          AX105432          1287 bp          DNA          linear          PAT 30-APR-2001
DEFINITION     Sequence 50 from Patent WO0123533.
ACCESSION      AX105432
VERSION        AX105432.1  GI:13921541
KEYWORDS
SOURCE
ORGANISM       synthetic construct
                other sequences; artificial sequences.
REFERENCE      1
AUTHORS        Guney,M. and Bienkowski,M.J.
TITLE          Alzheimer's disease secretase, app substrates therefor, and uses
                therefor
JOURNAL        Patent: WO 0123533-A 50 05-APR-2001;
                Pharmacia & Upjohn Company (US)
FEATURES
source         Location/Qualifiers
                1..1287
                /organism="synthetic construct"
                /mol_type="unassigned DNA"
                /db_xref="taxon:32630"
                /note="Hu-Asp2(b) delta TM"

Alignment of: us-10-726-967a-1 x AX105432 ..
Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 281
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
   ::::::::::::::|||:::
179 AAGCTGCCCCCTCCGGCCGGGCTCTCCGGGCTCT

```





[illegible]

LOCUS	AX105407	1302 bp	DNA	linear	PAT 30-APR-2003
DEFINITION	Sequence 25 from Patent W00123533.				
ACCESSION	AX105407				
VERSION	AX105407.1	GI:13921522			
KEYWORDS	.				
SOURCE	Homo sapiens (human)				
ORGANISM	Homo sapiens				
REFERENCE	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.				
AUTHORS	1				
TITLE	Gurney,M. and Bienkowski,M.J.				
JOURNAL	Alzheimer's disease secretase, app substrates therefor, and uses therefor				
FEATRES	Patent: WO 0123533-A 25 05-APR-2001;				
source	Pharmacia & Upjohn Company (US)				
	Location/Qualifiers				
	1..1302				
	/organism="Homo sapiens"				
	/mol_type="unassigned DNA"				
	/db_xref="taxon:9606"				
Alignment of: us-10-726-967a-1 x AX105407 ..					
Alignment segment 1/1: (-)					
	Quality:	32.00	Score:	281	
	Matching length:	11	Total length:	11	
	Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
	Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
	Gaps:	0			
Alignment:					
27	ArgLeuProLeuArgSerGlyLeuGlyAla	37			
119	AAAGCTCCCTCCGCGGCGGCTCTCGGAGCTCT	87			
Sequence name: rgep2ndb:AX573845					
Sequence documentation:					
LOCUS	AX573845	1302 bp	DNA	linear	PAT 07-JAN-2003
DEFINITION	Sequence 25 from Patent EP1249498.				
ACCESSION	AX573845				
VERSION	AX573845.1	GI:27551488			
KEYWORDS	.				
SOURCE	Homo sapiens (human)				
ORGANISM	Homo sapiens				
REFERENCE	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.				
AUTHORS	1				
TITLE	Gurney,M. and Bienkowski,M.J.				
JOURNAL	Alzheimer's disease secretase, app substrates therefor, and uses therefor				
FEATRES	Patent: EP 1249498-A 25 16-OCT-2002;				
source	PHARMACIA & UPJOHN COMPANY (US)				
	Location/Qualifiers				
	1..1302				
	/organism="Homo sapiens"				
	/mol_type="unassigned DNA"				
	/db_xref="taxon:9606"				
Alignment of: us-10-726-967a-1 x AX573845 ..					
Alignment segment 1/1: (-)					
	Quality:	32.00	Score:	281	
	Matching length:	11	Total length:	11	
	Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
	Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
	Gaps:	0			
Alignment:					

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
 :::::::::::::::::::::  
 119 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT 87

Sequence name: rgep2ndb:AX700454

Sequence documentation:

LOCUS AX700454 1302 bp DNA linear PAT 03-APR-2003  
 DEFINITION Sequence 9 from Patent WO03012089.  
 ACCESSION AX700454  
 VERSION AX700454.1 GI:29536243  
 KEYWORDS  
 ORGANISM Homo sapiens (human)  
 Homo sapiens  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheta; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1 Yon,J., Cleasby,A., Bruinzeel,W.D., Masure,S.L., Tickle,I. and Sharff,A.  
 Crystal structure of beta-site app cleaving enzyme (bace) and use thereof

JOURNAL Patent: WO 03012089-A 9 13-FEB-2003;  
 Asteq Technology Limited (GB) ; JANSSEN PHARMACEUTICA N.V. (BE)

FEATURES  
 source 1..1302  
 /organism="Homo sapiens"  
 /mol\_type="unassigned DNA"  
 /db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX700454 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
 :::::::::::::::::::::  
 119 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT 87

Sequence name: rgep2ndb:AR224123

Sequence documentation:

LOCUS AR224123 1305 bp DNA linear PAT 26-SEP-2002  
 DEFINITION Sequence 52 from patent US 6440698.  
 ACCESSION AR224123  
 VERSION AR224123.1 GI:23332783  
 KEYWORDS  
 SOURCE Unknown.  
 ORGANISM Unknown.  
 Unclassified.

REFERENCE 1 (bases 1 to 1305)  
 Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
 Alzheimer's disease secretase, APP substrates therefor, and uses thereof

JOURNAL Patent: US 6440698-A 52 27-AUG-2002;  
 Location/Qualifiers  
 1..1305  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224123 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11

Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55  
 Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
 Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
 :::::::::::::::::::::  
 179 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AR269254

Sequence documentation:

LOCUS AR269254 1305 bp DNA linear PAT 10-APR-2003  
 DEFINITION Sequence 52 from patent US 6500667.  
 ACCESSION AR269254  
 VERSION AR269254.1 GI:29700222  
 KEYWORDS  
 SOURCE Unknown.  
 ORGANISM Unknown.  
 Unclassified.

REFERENCE 1 (bases 1 to 1305)  
 Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

JOURNAL Patent: US 6500667-A 52 31-DEC-2002;  
 location/Qualifiers  
 1..1305  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269254 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
 :::::::::::::::::::::  
 179 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AR478809

Sequence documentation:

LOCUS AR478809 1305 bp DNA linear PAT 14-MAY-2004  
 DEFINITION Sequence 52 from patent US 669671.  
 ACCESSION AR478809  
 VERSION AR478809.1 GI:47237529  
 KEYWORDS  
 SOURCE Unknown.  
 ORGANISM Unknown.  
 Unclassified.

REFERENCE 1 (bases 1 to 1305)  
 Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
 Alzheimer's disease secretase, APP substrates therefor, and uses thereof

JOURNAL Patent: US 669671-A 52 02-MAR-2004;  
 Location/Qualifiers  
 1..1305  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478809 ..

Alignment segment 1/1: (-)

Quality: 32.00      Score: 281  
Matching length: 11      Total length: 11  
Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82      Total Percent Identity: 54.55  
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|:::|:::  
179 AAGCTGCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR487375

Sequence documentation: 1305 bp DNA linear PAT 14-MAY-2004

LOCUS AR487375  
DEFINITION Sequence 52 from patent US 6706485.  
ACCESSION AR487375  
VERSION AR487375.1 GI:47252473  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
UNCLASSIFIED.

REFERENCE 1 (bases 1 to 1305)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinriksen,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Method of identifying agents that inhibit APP processing activity  
JOURNAL Patent: US 6706485-A 52 16-MAR-2004;  
FEATURES Location/Qualifiers  
1. 1305  
source /organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487375 ..

Alignment segment 1/1: (-)

Quality: 32.00      Score: 281  
Matching length: 11      Total length: 11  
Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82      Total Percent Identity: 54.55  
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|:::|:::  
179 AAGCTGCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR532015

Sequence documentation: 1305 bp DNA linear PAT 08-OCT-2004

LOCUS AR532015  
DEFINITION Sequence 52 from patent US 6727074.  
ACCESSION AR532015  
VERSION AR532015.1 GI:53920549  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
UNCLASSIFIED.

REFERENCE 1 (bases 1 to 1305)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinriksen,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
JOURNAL Patent: US 6727074-A 52 27-APR-2004;  
FEATURES Location/Qualifiers  
1. 1305  
source /organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR532015 ..

Alignment segment 1/1: (-)

Quality: 32.00      Score: 281  
Matching length: 11      Total length: 11  
Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82      Total Percent Identity: 54.55  
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|:::|:::  
179 AAGCTGCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR540916

Sequence documentation: 1305 bp DNA linear PAT 08-OCT-2004

LOCUS AR540916  
DEFINITION Sequence 52 from patent US 6737510.  
ACCESSION AR540916  
VERSION AR540916.1 GI:53932429  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
UNCLASSIFIED.

REFERENCE 1 (bases 1 to 1305)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinriksen,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
JOURNAL Patent: US 6737510-A 52 18-MAY-2004;  
FEATURES Location/Qualifiers  
1. 1305  
source /organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540916 ..

Alignment segment 1/1: (-)

Quality: 32.00      Score: 281  
Matching length: 11      Total length: 11  
Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82      Total Percent Identity: 54.55  
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|:::|:::  
179 AAGCTGCCCTCCGGCCGGCTCCTCGGGCTCT 147

Sequence name: rgep2ndb:AR560126

Sequence documentation: 1305 bp DNA linear PAT 08-OCT-2004

LOCUS AR560126  
DEFINITION Sequence 52 from patent US 6753163.  
ACCESSION AR560126  
VERSION AR560126.1 GI:53970493  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
UNCLASSIFIED.

REFERENCE 1 (bases 1 to 1305)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinriksen,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
JOURNAL Patent: US 6753163-A 52 22-JUN-2004;  
FEATURES Location/Qualifiers  
1. 1305  
source /organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560126 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT

Sequence name: rgep2ndb:AX105434

Sequence documentation:

LOCUS AX105434 1305 bp DNA linear PAT 30-APR-2001

DEFINITION Sequence 52 from Patent WO0123533.

ACCESSION AX105434

VERSION AX105434.1 GI:13921542

KEYWORDS

SOURCE synthetic construct

ORGANISM synthetic construct

REFERENCE other sequences; artificial sequences.

AUTHORS

TITLE Gurney, M. and Bienkowski, M.J.

JOURNAL Alzheimer's disease secretase, app substrates therefor, and uses

Pharmacia & Upjohn Company (US)

location/Qualifiers

source

1. .1305

/organism="synthetic construct"

/mol\_type="unassigned DNA"

/db\_xref="taxon:32630"

/note="Hu-Ap2 (b) delta TM"

Alignment of: us-10-726-967a-1 x AX105434 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT

Sequence name: rgep2ndb:AX573872

Sequence documentation:

LOCUS AX573872 1305 bp DNA linear PAT 07-JAN-2003

DEFINITION Sequence 52 from Patent EP1249498.

ACCESSION AX573872

VERSION AX573872.1 GI:27551508

KEYWORDS

SOURCE synthetic construct

ORGANISM synthetic construct

REFERENCE other sequences; artificial sequences.

AUTHORS

TITLE Gurney, M. and Bienkowski, M.J.

JOURNAL Alzheimer's disease secretase, app substrates therefor, and uses

Patent: EP 1249498-A 52 16-OCT-2002;

PHARMACIA & UPJOHN COMPANY (US)

location/Qualifiers

source

1. .1305

/organism="synthetic construct"

/mol\_type="unassigned DNA"

/db\_xref="taxon:32630"

/note="Hu-Ap2 (b) delta TM"

Alignment of: us-10-726-967a-1 x AX573872 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT

Sequence name: rgep2ndb:AB050438

Sequence documentation:

LOCUS AB050438 1333 bp mRNA linear PRI 17-JUL-2001

DEFINITION Homo sapiens BACE mRNA for beta-site APP cleaving enzyme I-432,

complete cds.

ACCESSION AB050438

VERSION AB050438.1 GI:13568410

KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM

Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.

REFERENCE

AUTHORS

TITLE

JOURNAL

MEDLINE

PUBMED

1151562

2 (bases 1 to 1333)

Tanahashi, H.

Direct Submission

Submitted (21-OCT-2000) Hiroshi Tanahashi, National Institute of

Neuroscience, Division of Demyelinating Disease and Aging; 4-1-1,

Ogawabashi, Kodaira, Tokyo 187-8551, Japan

(E-mail: tanahashi@ncnp.go.jp, Tel: 81423412711 (ex. 5163),

Fax: 81423461747)

Location/Qualifiers

1. .1333

/organism="Homo sapiens"

/mol\_type="mRNA"

/db\_xref="taxon:9606"

/tissue\_type="brain"

1. .1333

/gene="BACE"

4. .1302

/gene="BACE"

/note="alternative splicing isoform"

/product="beta-site APP cleaving enzyme I-432"

/protein\_id="BAB40933.1"

/db\_xref="GI:13568411"

/translation="MAQALPILLMKGAVALPAHQHGRIRLPKSGLGAGPGLRLP

RTIDPPEPRGRGSGFVEMVDNLKSGSGGYVEMTVGSPPQTLNLTVDTSSNFAVG

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SVGSMIGIDHSILYVSLWYTPIRREMYEVIIIVRINQDLMDCKEYNYDKSI

VDSGTNRLPKVFEAAVKSIIKAASSTKFPDGFALGSLVCMQAGTTPMNIPIVIS

LYLKGSEVNTQSFRTITLLPOQYLRPEVEDVATSODDCYKRAISGSGSTGTWGANVIMGFY  
VVFDRARKRIGFVSAACHVDEFTAAVAGPVTLLDMECGYNIPQTBESTLMTIAYV  
MAAICAFMLPLCLMWCCWRRCIRLQCHDDFADDISLTK"

Alignment of: us-10-726-967a-1 x AB050438 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
182 AAGCTGCCCCCTCCGGCCGGGCTCTCCGGGCTCT 150

Sequence name: rgep2ndb:BD235895

Sequence documentation:

LOCUS BD235895 1341 bp DNA linear PAT 17-JUL-2003  
DEFINITION Alzheimer's disease secretase.  
ACCESSION BD235895  
VERSION BD235895.1 GI:33045565  
KEYWORDS JP 2002526081-A/11.  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens

REFERENCE 1 (bases 1 to 1341)  
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase  
JOURNAL Patent: JP 2002526081-A 11 20-AUG-2002;  
PHARMACIA AND UPJOHN CO  
COMMENT OS Homo sapiens (human)  
PN JP 2002526081-A/11  
PD 20-AUG-2002  
PF 23-SEP-1999 JP 2000574268  
PR 24-SEP-1998 US 60/101594  
PI MARK E GURNEY,MICHAEL JEROME BIENKOWSKI,ROBERT LEROY PI  
HEINRICHSON,R

PC C12N1/19,  
PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/15,  
G01N33/50//C12N1/21,C12R1/19,C12N15/00,C12N5/00 CC  
PC Alzheimer's disease secretase  
ALZHEIMER'S DISEASE SECRETASE  
FH Key Location/Qualifiers  
FT source 1..1341  
FT /organism="Homo sapiens (human)".

FEATURES  
source 1..1341  
/organism="Homo sapiens"  
/mol\_type="genomic DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235895 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
158 AAGCTGCCCCCTCCGGCCGGGCTCTCCGGGCTCT 126

Sequence name: rgep2ndb:AR224101

Sequence documentation:

LOCUS AR224101 1341 bp DNA linear PAT 26-SEP-2002  
DEFINITION Sequence 21 from patent US 6440698.  
ACCESSION AR224101  
VERSION AR224101.1 GI:23332761  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1341)  
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
JOURNAL Patent: US 6440698-A 21 27-AUG-2002;  
FEATURES Location/Qualifiers  
source 1..1341  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224101 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
158 AAGCTGCCCCCTCCGGCCGGGCTCTCCGGGCTCT 126

Sequence name: rgep2ndb:AR269232

Sequence documentation:

LOCUS AR269232 1341 bp DNA linear PAT 10-APR-2003  
DEFINITION Sequence 21 from patent US 6500667.  
ACCESSION AR269232  
VERSION AR269232.1 GI:29700200  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1341)  
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Aspartyl protease 2 (Asp2) antisense oligonucleotides  
JOURNAL Patent: US 6500667-A 21 31-DEC-2002;  
FEATURES Location/Qualifiers  
source 1..1341  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269232 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:



## Alignment:

27 ArgleupProleuArgserglyleuglyglyala  
:::|||||:::|  
158 AAGCTGCCCCCTCCGCGCGGCTCCTCGGGCTCT

37  
126

Sequence name: rgep2ndb:AR478787

## Sequence documentation:

LOCUS AR478787 1341 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 21 from patent US 6699671.  
ACCESSION AR478787  
VERSION AR478787.1 GI:47237507  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1341)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
thereof

JOURNAL Patent: US 6699671-A 21 02-MAR-2004;  
FEATURES Location/Qualifiers  
source 1..1341  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478787 ..

## Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

## Alignment:

27 ArgleupProleuArgserglyleuglyglyala  
:::|||||:::|  
158 AAGCTGCCCCCTCCGCGCGGCTCCTCGGGCTCT

37  
126

Sequence name: rgep2ndb:AR487353

## Sequence documentation:

LOCUS AR487353 1341 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 21 from patent US 6706485.  
ACCESSION AR487353  
VERSION AR487353.1 GI:47252451  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1341)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.

TITLE Method of identifying agents that inhibit APP processing activity  
thereof

JOURNAL Patent: US 6706485-A 21 16-MAR-2004;  
FEATURES Location/Qualifiers  
source 1..1341  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487353 ..

## Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55

Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
Gaps: 0

## Alignment:

27 ArgleupProleuArgserglyleuglyglyala  
:::|||||:::|  
158 AAGCTGCCCCCTCCGCGCGGCTCCTCGGGCTCT

37  
126

Sequence name: rgep2ndb:AR531993

Sequence documentation:  
LOCUS AR531993 1341 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 21 from patent US 6727074.  
ACCESSION AR531993  
VERSION AR531993.1 GI:53920527  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1341)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
thereof

JOURNAL Patent: US 6727074-A 21 27-APR-2004;  
FEATURES Location/Qualifiers  
source 1..1341  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531993 ..

## Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

## Alignment:

27 ArgleupProleuArgserglyleuglyglyala  
:::|||||:::|  
158 AAGCTGCCCCCTCCGCGCGGCTCCTCGGGCTCT

37  
126

Sequence name: rgep2ndb:AR540894

Sequence documentation:  
LOCUS AR540894 1341 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 21 from patent US 6737510.  
ACCESSION AR540894  
VERSION AR540894.1 GI:53932407  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1341)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Van,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
thereof

JOURNAL Patent: US 6737510-A 21 18-MAY-2004;  
FEATURES Location/Qualifiers  
source 1..1341  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540894 ..

## Alignment segment 1/1: (-)



## JOURNAL

Patent: JP 2002526081-A 15 20-AUG-2002;  
 PHARMACIA AND UPJOHN CO

## COMMENT

OS Homo sapiens (human)  
 PN JP 2002526081-A/15  
 PD 20-AUG-2002  
 PP 23-SEP-1999 JP 2000574268  
 PR 24-SEP-1998 US 60/101594  
 PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI  
 HEINRIKSON,  
 PI LUIS A. PARODI, RIOIANG YAN  
 PC C12N15/09, A61K45/00, A61P25/28, C07K14/47, C07K16/18, C12N1/15, PC  
 C12N1/19,  
 PC C12N1/21, C12N5/10, C12N9/64, C12P21/02, C12P21/08, C12Q1/37, G01N33/ PC  
 15,  
 PC G01N33/50// (C12N1/21, C12R1:19), C12N15/00, C12N5/00 CC  
 Alzheimer's disease secretase  
 FT Key Location/Qualifiers  
 FT source 1..1362  
 FT /organism="Homo sapiens (human)"  
 /db\_xref="taxon:9606"

## FEATURES

source Location/Qualifiers  
 1..1362  
 /organism="Homo sapiens"  
 /mol\_type="genomic DNA"  
 /db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235899 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|||||:::|||||:::
179 AAGCTGCCCCCTCCGGCCGGGCTCTCCGGGCTCT 147

```

Sequence name: rgep2ndb:AR224105

Sequence documentation:

LOCUS AR224105 1362 bp DNA linear PAT 26-SEP-2002  
 DEFINITION Sequence 29 from patent US 6440698.  
 ACCESSION AR224105  
 VERSION AR224105.1 GI:23332765

## KEYWORDS

SOURCE Unknown.

## ORGANISM

Unclassified.

REFERENCE 1 (bases 1 to 1362)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
 TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor  
 JOURNAL Patent: US 6440698-A 29 27-AUG-2002;  
 FEATURES Location/Qualifiers  
 source 1..1362  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224105 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|||||:::|||||:::
179 AAGCTGCCCCCTCCGGCCGGGCTCTCCGGGCTCT 147

```

Sequence name: rgep2ndb:AR269236

Sequence documentation:

LOCUS AR269236 1362 bp DNA linear PAT 10-APR-2003  
 DEFINITION Sequence 29 from patent US 6500667.  
 ACCESSION AR269236  
 VERSION AR269236.1 GI:29700204

## KEYWORDS

SOURCE Unknown.

## ORGANISM

Unclassified.

REFERENCE 1 (bases 1 to 1362)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
 TITLE Aspartyl protease 2 (Asp2) antisense oligonucleotides  
 JOURNAL Patent: US 6500667-A 29 31-DEC-2002;  
 FEATURES Location/Qualifiers  
 source 1..1362  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269236 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|||||:::|||||:::
179 AAGCTGCCCCCTCCGGCCGGGCTCTCCGGGCTCT 147

```

Sequence name: rgep2ndb:AR478791

Sequence documentation:

LOCUS AR478791 1362 bp DNA linear PAT 14-MAY-2004  
 DEFINITION Sequence 29 from patent US 6699671.  
 ACCESSION AR478791  
 VERSION AR478791.1 GI:47237511

## KEYWORDS

SOURCE Unknown.

## ORGANISM

Unclassified.

REFERENCE 1 (bases 1 to 1362)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
 TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor  
 JOURNAL Patent: US 6699671-A 29 02-MAR-2004;  
 FEATURES Location/Qualifiers  
 source 1..1362  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478791 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55

Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||  
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT 147

Sequence name: rgep2ndb:AR487357

Sequence documentation:

LOCUS AR487357 1362 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 29 from patent US 6706485.  
ACCESSION AR487357  
VERSION AR487357.1 GI:47252455  
KEYWORDS  
SOURCE  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1362)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.

TITLE Method of identifying agents that inhibit APP processing activity  
JOURNAL Patent: US 6706485-A 29 16-MAR-2004;  
FEATURES Location/Qualifiers  
source 1..1362  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487357 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||  
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT 147

Sequence name: rgep2ndb:AR531997

Sequence documentation:

LOCUS AR531997 1362 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 29 from patent US 6727074.  
ACCESSION AR531997  
VERSION AR531997.1 GI:53920531  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1362)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6727074-A 29 27-APR-2004;  
FEATURES Location/Qualifiers  
source 1..1362  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531997 ..

Alignment segment 1/1: (-)

Quality: 32.00

Score: 281

Matching length: 11 Total length: 11  
Total Percent Similarity: 81.82 Matching Percent Identity: 54.55  
Total Percent Identity: 54.55  
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||  
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT 147

Sequence name: rgep2ndb:AR540898

Sequence documentation:

LOCUS AR540898 1362 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 29 from patent US 6737510.  
ACCESSION AR540898  
VERSION AR540898.1 GI:53932411  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1362)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
thereof  
JOURNAL Patent: US 6737510-A 29 18-MAY-2004;  
FEATURES Location/Qualifiers  
source 1..1362  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540898 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||  
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT 147

Sequence name: rgep2ndb:AR560108

Sequence documentation:

LOCUS AR560108 1362 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 29 from patent US 6753163.  
ACCESSION AR560108  
VERSION AR560108.1 GI:53970475  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1362)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6753163-A 29 22-JUN-2004;  
FEATURES Location/Qualifiers  
source 1..1362  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560108 ..

## Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

## Alignment:

27 ArgleupProleuArgSerg1yleuGlyGlyAla  
 179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGGCTCT

Sequence name: rgep2ndb:AX105411

## Sequence documentation:

LOCUS AX105411 1362 bp DNA linear PAT 30-APR-2001  
 DEFINITION Sequence 29 from Patent WO0123533.  
 ACCESSION AX105411  
 VERSION AX105411.1 GI:13921524  
 KEYWORDS  
 SOURCE Homo sapiens (human)  
 ORGANISM Homo sapiens  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE  
 AUTHORS Gurney, M. and Bienkowski, M.J.  
 TITLE Alzheimer's disease secretase, app substrates therefor, and uses  
 therefor  
 JOURNAL Patent: WO 0123533-A 29 05-APR-2001;  
 Pharmacia & Upjohn Company (US)  
 FEATURES  
 source  
 1.1362  
 /organism="Homo sapiens"  
 /mol\_type="unassigned DNA"  
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Alignment of: us-10-726-967a-1 x AX105411 ..

## Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

## Alignment:

27 ArgleupProleuArgSerg1yleuGlyGlyAla  
 179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGGCTCT

Sequence name: rgep2ndb:AX573849

## Sequence documentation:

LOCUS AX573849 1362 bp DNA linear PAT 07-JAN-2003  
 DEFINITION Sequence 29 from Patent EP1249498.  
 ACCESSION AX573849  
 VERSION AX573849.1 GI:27551490  
 KEYWORDS  
 SOURCE Homo sapiens (human)  
 ORGANISM Homo sapiens  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE  
 AUTHORS Gurney, M. and Bienkowski, M.J.  
 TITLE Alzheimer's disease secretase, app substrates therefor, and uses  
 therefor  
 JOURNAL Patent: EP 1249498-A 29 16-OCT-2002;  
 PHARMACIA & UPJOHN COMPANY (US)  
 FEATURES  
 Location/Qualifiers

source 1.1362

/organism="Homo sapiens"  
 /mol\_type="unassigned DNA"  
 /db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573849 ..

## Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

## Alignment:

27 ArgleupProleuArgSerg1yleuGlyGlyAla  
 179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGGCTCT

Sequence name: rgep2ndb:CQ772936

## Sequence documentation:

LOCUS CQ772936 1368 bp DNA linear PAT 04-MAR-2004  
 DEFINITION Sequence 1 from Patent WO2004011641.  
 ACCESSION CQ772936  
 VERSION CQ772936.1 GI:45126404  
 KEYWORDS  
 SOURCE Homo sapiens (human)  
 ORGANISM Homo sapiens  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE  
 AUTHORS Villard, L.M., Patel, S.J., Yon, J.R., Cleasby, A., Hamilton, B.J. and  
 Shah, A.  
 TITLE Crystal structure of beta-site app-cleaving enzyme (bace)  
 mutant and uses thereof  
 JOURNAL Patent: WO 2004011641-A 1 05-FEB-2004;  
 Astex Technology Limited (GB)  
 FEATURES  
 source  
 1.1368  
 /organism="Homo sapiens"  
 /mol\_type="unassigned DNA"  
 /db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x CQ772936 ..

## Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

## Alignment:

27 ArgleupProleuArgSerg1yleuGlyGlyAla  
 185 AAGCTGCCCCCTCCGCGCGGCTCCTCGGGCTCT

Sequence name: rgep2ndb:AF338817

## Sequence documentation:

LOCUS AF338817 1374 bp mRNA linear PRI 21-MAY-2002  
 DEFINITION Homo sapiens beta-site APP cleaving enzyme type C mRNA, complete  
 cds  
 ACCESSION AF338817  
 VERSION AF338817.1 GI:13699247  
 KEYWORDS  
 SOURCE Homo sapiens (human)  
 ORGANISM Homo sapiens

REFERENCE	Eukaryota; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.			
AUTHORS	1 (basee 1 to 1374)			
TITLE	Ehnealt,R., Michel,B., De Pietri Tonelli,D., Zaccchetti,D., Simon,K., and Keller,P.			
JOURNAL	Splice variants of the beta-site APP-cleaving enzyme BACE1 in human brain and pancreas			
REFERENCE	Biochem. Biophys. Res. Commun. 293 (1), 30-37 (2002)			
AUTHORS	2 (basee 1 to 1374)			
PUBMED	Zacchetti,D., De Pietri Tonelli,D. and Schnurbus,R.			
JOURNAL	Direct Submission			
FEATURES	Submitted (19-JUN-2001) Dblc, San Raffaele Scientific Institute, via Olgettina 58, Milano, MI 20132, Italy			
Source	location/Qualifiers			
CDS	1..1374			
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	/db_xref="taxon:9606"			
	/tissue_type="exocrine pancreas"			
	1..1374			
	/note="BACE-1; potential splice variant of beta-site APP cleaving enzyme (BACE)"			
	/codon_start=1			
	/product="beta-site APP cleaving enzyme type C"			
	/protein_id="AAK38375.1"			
	/db_xref="GI:13699248"			
	/translation="MAQLPWLMLMGAGVLPAGTQHGRLPLRSGGAGPLRLARPEBBERPERGRSGFVEMVNLKSGSGGYVEMVSGSPQTNILVDTSSNFAVGDCGFWLQGLVCMQAGTTPWNIIPVVISLXLMGVTNOSFRITLLPQVYLRPVEDVTSDDGCFYALSSQSTGVMGAVIMEGFVVDPRARKIIGFVASCCHADERTAVAGPVPVTHVNEINGDQLKMDCKEYNDKSIWBSGTINLBPKVFAFAAKSIKASSTKFPDITVEVEINSGDLPKAGFPLNOSERVLASVGGSNITIGIDHSITLGSMTPIRREYEV			
	TLMDEDCGYNIPTQDESTLMTIAYMAICALFWLPLCLMVQMRCLRLRQCHDPEA			
	DDISLKLK"			
Alignment of: us-10-726-9674-1 x AFJ38617	..			
Alignment segment 1/1: (-)				
Matching length: 11	Quality: 32.00		Escore: 281	
Matching Percent Similarity: 81.82	Total length: 11		11	
Total Percent Similarity: 81.82	Matching Percent Identity: 54.55		54.55	
Gaps: 0	Total Percent Identity: 54.55		54.55	
Alignment:				
27 ArgLeuProLeuArgSerGlyLeuGlyGIYALA	37			
119 AAGCTGCCCTCTCGGCGGCTCTCTCGGCTCT	147			
Sequence name: rgpe2ndb:BD235896				
Sequence documentation:				
LOCUS BD235896	1380 bp		DNA	
DEFINITION Alzheimer's disease secretase.	linear		PAT 17-JUL-2003	
ACCESSION BD235896				
VERSION BD235896.1	GI:33045666			
KEYWORDS JP 2002526081-A/12.				
SOURCE Homo sapiens (human)				
ORGANISM Homo sapiens				
REFERENCE Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.				
AUTHORS Gureyev,M.E., Bilenkowskii,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.				
TITLE Alzheimer's disease secretase				
JOURNAL Patent: JP 2002526081-A 12 20-AUG-2002;				
PHARMACIA AND UPJOHN CO				
OS Homo sapiens (human)				
COMMENT				

[illegible]

FT source 1.1380  
/organism="Homo sapiens (human)"  
FEATURES  
source location/Qualifiers  
1.1380  
/organism="Homo sapiens"  
/mol\_type="genomic DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235900 ..  
Alignment segment 1/1: (-)  
Quality: 32.00  
Matching length: 11  
Total length: 281  
Matching Percent Similarity: 81.82  
Total Percent Identity: 54.55  
Total Percent Similarity: 81.82  
Gaps: 0

Alignment:  
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|  
197 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AR224102  
Sequence documentation:  
LOCUS AR224102 1380 bp DNA linear PAT 26-SEP-2002  
DEFINITION Sequence 23 from patent US 6440698.  
ACCESSION AR224102  
VERSION AR224102.1 GI:23332762  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unclassified.  
REFERENCE 1 (bases 1 to 1380)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor  
JOURNAL Patent: US 6440698-A 23 27-AUG-2002;  
FEATURES location/Qualifiers  
source 1.1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224102 ..  
Alignment segment 1/1: (-)  
Quality: 32.00  
Matching length: 11  
Total length: 281  
Matching Percent Similarity: 81.82  
Total Percent Identity: 54.55  
Total Percent Similarity: 81.82  
Gaps: 0

Alignment:  
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|  
197 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 165

Sequence name: rgep2ndb:AR224106  
Sequence documentation:  
LOCUS AR224106 1380 bp DNA linear PAT 26-SEP-2002  
DEFINITION Sequence 31 from patent US 6440698.  
ACCESSION AR224106  
VERSION AR224106.1 GI:23332766  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unclassified.

REFERENCE 1 (bases 1 to 1380)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor  
JOURNAL Patent: US 6440698-A 31 27-AUG-2002;  
FEATURES location/Qualifiers  
source 1.1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224106 ..  
Alignment segment 1/1: (-)  
Quality: 32.00  
Matching length: 11  
Total length: 281  
Matching Percent Similarity: 81.82  
Total Percent Identity: 54.55  
Total Percent Similarity: 81.82  
Gaps: 0

Alignment:  
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|  
197 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 165

Sequence name: rgep2ndb:AR269233  
Sequence documentation:  
LOCUS AR269233 1380 bp DNA linear PAT 10-APR-2003  
DEFINITION Sequence 23 from patent US 6500667.  
ACCESSION AR269233  
VERSION AR269233.1 GI:29700201  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unclassified.  
REFERENCE 1 (bases 1 to 1380)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and Yan,R.  
TITLE Aspartyl protease 2 (Asp2) antisense oligonucleotides  
JOURNAL Patent: US 6500667-A 23 31-DEC-2002;  
FEATURES location/Qualifiers  
source 1.1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269233 ..  
Alignment segment 1/1: (-)  
Quality: 32.00  
Matching length: 11  
Total length: 281  
Matching Percent Similarity: 81.82  
Total Percent Identity: 54.55  
Total Percent Similarity: 81.82  
Gaps: 0

Alignment:  
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|  
197 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 165

Sequence name: rgep2ndb:AR269237  
Sequence documentation:  
LOCUS AR269237 1380 bp DNA linear PAT 10-APR-2003  
DEFINITION Sequence 31 from patent US 6500667.  
ACCESSION AR269237  
VERSION AR269237.1 GI:29700205  
KEYWORDS  
SOURCE Unknown.

ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1380)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
TITLE Aspartyl protease 2 (Asp2) antiense oligonucleotides  
JOURNAL Patent: US 6500667-A 31 31-DEC-2002;  
FEATURES Location/Qualifiers  
source 1..1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269237 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleupProleuArgSerg1yleuGlyGlyAla  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCCCTCCGCGGCTCCTCGGCTCT

Sequence name: rgep2ndb:AR478788

Sequence documentation:

LOCUS AR478788 1380 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 23 from patent US 6699671.  
ACCESSION AR478788  
VERSION AR478788.1 GI:47237508  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1380)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor  
JOURNAL Patent: US 6699671-A 23 02-MAR-2004;  
FEATURES Location/Qualifiers  
source 1..1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478788 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleupProleuArgSerg1yleuGlyGlyAla  
:::|||||:::|||||:::|||||:::  
197 AAGCTGCCCCCTCCGCGGCTCCTCGGCTCT

Sequence name: rgep2ndb:AR478792

Sequence documentation:  
LOCUS AR478792 1380 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 31 from patent US 6699671.  
ACCESSION AR478792  
VERSION AR478792.1 GI:47237512

KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1380)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor  
JOURNAL Patent: US 6699671-A 31 02-MAR-2004;  
FEATURES Location/Qualifiers  
source 1..1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478792 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleupProleuArgSerg1yleuGlyGlyAla  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCCCTCCGCGGCTCCTCGGCTCT

Sequence name: rgep2ndb:AR4787354

Sequence documentation:

LOCUS AR4787354 1380 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 23 from patent US 6706485.  
ACCESSION AR4787354  
VERSION AR4787354.1 GI:47252452  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1380)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
TITLE Method of identifying agents that inhibit APP processing activity  
JOURNAL Patent: US 6706485-A 23 16-MAR-2004;  
FEATURES Location/Qualifiers  
source 1..1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR4787354 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgleupProleuArgSerg1yleuGlyGlyAla  
:::|||||:::|||||:::|||||:::  
197 AAGCTGCCCCCTCCGCGGCTCCTCGGCTCT

Sequence name: rgep2ndb:AR4787358

Sequence documentation:  
LOCUS AR4787358 1380 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 31 from patent US 6706485.



[illegible]

```

LOCUS       ARS31998             1380 bp    DNA             linear      PAT 08-OCT-2004
DEFINITION   Sequence 31 from patent US 6727074.
ACCESSION    ARS31998
VERSION      ARS31998.1  GI:53920532
KEYWORDS     .
SOURCE       Unknown.
ORGANISM     Unknown.
REFERENCE    Unclassified.
AUTHORS      1 (bases 1 to 1380)
              Gunney,M.E., Blenkowski,M.J., Heinrikson,R.L., Parodi,L.A. and
              Yan,R.
TITLE        Alzheimer's disease secretase, APP substrates therefor, and uses
              thereof
JOURNAL      Patent: US 6727074-A 31 27-APR-2004;
FEATURES     Location/Qualifiers
              1..1380
               /organism="unknown"
               /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x ARS31998 ..
Alignment segment 1/1: (-)

Quality:          32.00                      Bscore:          281
Matching length:  11                        Total length:   11
Matching Percent Similarity:  81.82           Matching Percent Identity:  54.55
Total Percent Similarity:      81.82           Total Percent Identity:  54.55
Gaps:                                0

Alignment:
27 ArgLeuProLeuArgSerGIyleuGIyGIyAla                37
:::|||||::|||::|::|::|::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGGCGGGCTCCTCGGCGCTCT                  147

Sequence name: rgep2ndb:ARS40895

Sequence documentation:
LOCUS       ARS40895             1380 bp    DNA             linear      PAT 08-OCT-2004
DEFINITION   Sequence 23 from patent US 6737510.
ACCESSION    ARS40895
VERSION      ARS40895.1  GI:53932408
KEYWORDS     .
SOURCE       Unknown.
ORGANISM     Unknown.
REFERENCE    Unclassified.
AUTHORS      1 (bases 1 to 1380)
              Gunney,M.E., Blenkowski,M.J., Heinrikson,R.L., Parodi,L.A. and
              Yan,R.
TITLE        Alzheimer's disease secretase, APP substrates therefor, and uses
              thereof
JOURNAL      Patent: US 6737510-A 23 18-MAY-2004;
FEATURES     Location/Qualifiers
              1..1380
               /organism="unknown"
               /mol_type="genomic DNA"

Alignment of: us-10-726-967a-1 x ARS40895 ..
Alignment segment 1/1: (-)

Quality:          32.00                      Bscore:          281
Matching length:  11                        Total length:   11
Matching Percent Similarity:  81.82           Matching Percent Identity:  54.55
Total Percent Similarity:      81.82           Total Percent Identity:  54.55
Gaps:                                0

Alignment:
27 ArgLeuProLeuArgSerGIyleuGIyGIyAla                37
:::|||||::|||::|::|::|::|::|::|::|::|::|::|::|::|
197 AAGCTGCCCTCCGGCGGGCTCCTCGGCGCTCT                  165

```

Sequence name: rgep2ndb:AR540899

Sequence documentation:  
LOCUS AR540899 1380 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 31 from patent US 6737510.  
ACCESSION AR540899  
VERSION AR540899.1 GI:53932412  
KEYWORDS  
SOURCE  
ORGANISM Unknown.  
REFERENCE  
AUTHORS 1 (bases 1 to 1380)  
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
thereof  
JOURNAL Patent: US 6737510-A 31 18-MAY-2004;  
FEATURES  
source 1..1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540899 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::
179 AAGCTGCCCCCTCCGGCCGGCTCCTCGGCTCT 147
```

Sequence name: rgep2ndb:AR560105

Sequence documentation:  
LOCUS AR560105 1380 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 23 from patent US 6753163.  
ACCESSION AR560105  
VERSION AR560105.1 GI:53970472  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE  
AUTHORS 1 (bases 1 to 1380)  
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
thereof  
JOURNAL Patent: US 6753163-A 23 22-JUN-2004;  
FEATURES  
source 1..1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560105 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
```

```
:::|||||:::
197 AAGCTGCCCCCTCCGGCCGGCTCCTCGGCTCT 165
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Sequence name: rgep2ndb:AR560109

Sequence documentation:  
LOCUS AR560109 1380 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 31 from patent US 6753163.  
ACCESSION AR560109  
VERSION AR560109.1 GI:53970476  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE  
AUTHORS 1 (bases 1 to 1380)  
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
thereof  
JOURNAL Patent: US 6753163-A 31 22-JUN-2004;  
FEATURES  
source 1..1380  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560109 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::
179 AAGCTGCCCCCTCCGGCCGGCTCCTCGGCTCT 147
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Sequence name: rgep2ndb:AX105405

Sequence documentation:  
LOCUS AX105405 1380 bp DNA linear PAT 30-APR-2001  
DEFINITION Sequence 23 from Patent WO0123533.  
ACCESSION AX105405  
VERSION AX105405.1 GI:13921521  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
REFERENCE  
AUTHORS 1  
Mammalia; Eutheria; Chordata; Craniata; Vertebrata; Euteleostomi;  
Alzheimer's disease secretase, app substrates therefor, and uses  
thereof  
JOURNAL Patent: WO 0123533-A 23 05-APR-2001;  
FEATURES  
source 1..1380  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105405 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment: Gaps: 0

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
197 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

Sequence name: rgep2ndb:AX105413

Sequence documentation:

LOCUS AX105413 1380 bp DNA linear PAT 30-APR-2001  
DEFINITION Sequence 31 from Patent WO0123533.  
ACCESSION AX105413  
VERSION AX105413.1 GI:13921525

KEYWORDS  
SOURCE Homo sapiens (human)

ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

AUTHORS Gurney, M. and Bienkowski, M.J.  
TITLE Alzheimer's disease secretase, app substrates therefor, and uses  
therefor  
JOURNAL Patent: WO 0123533-A 31 05-APR-2001;  
Pharmacia & Upjohn Company (US)

FEATURES  
source 1.1380  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105413 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	281
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

Sequence name: rgep2ndb:AX573843

Sequence documentation:

LOCUS AX573843 1380 bp DNA linear PAT 07-JAN-2003  
DEFINITION Sequence 23 from Patent EP1249498.  
ACCESSION AX573843  
VERSION AX573843.1 GI:27551487

KEYWORDS  
SOURCE Homo sapiens (human)

ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

AUTHORS Gurney, M. and Bienkowski, M.J.  
TITLE Alzheimer's disease secretase, app substrates therefor, and uses  
therefor  
JOURNAL Patent: EP 1249498-A 23 16-OCT-2002;  
Pharmacia & Upjohn Company (US)

FEATURES  
source 1.1380  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573843 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	281
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
197 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

Sequence name: rgep2ndb:AX573851

Sequence documentation:

LOCUS AX573851 1380 bp DNA linear PAT 07-JAN-2003  
DEFINITION Sequence 31 from Patent EP1249498.  
ACCESSION AX573851  
VERSION AX573851.1 GI:27551491

KEYWORDS  
SOURCE Homo sapiens (human)

ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE

AUTHORS Gurney, M. and Bienkowski, M.J.  
TITLE Alzheimer's disease secretase, app substrates therefor, and uses  
therefor  
JOURNAL Patent: EP 1249498-A 31 16-OCT-2002;  
Pharmacia & Upjohn Company (US)

FEATURES  
source 1.1380  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573851 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	281
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

Sequence name: rgep2ndb:CQ772938

Sequence documentation:

LOCUS CQ772938 1386 bp DNA linear PAT 04-MAR-2004  
DEFINITION Sequence 3 from Patent WO2004011641.  
ACCESSION CQ772938  
VERSION CQ772938.1 GI:45126405

KEYWORDS  
SOURCE synthetic construct  
synthetic construct  
other sequences; artificial sequences.

REFERENCE

AUTHORS Villard, L.M., Patel, S.J., Yon, J.R., Cleasby, A., Hamilton, B.J. and  
Shah, A.  
TITLE Crystal structure of beta-site app-cleaving enzyme (bace)  
mutatnsand uses thereof  
JOURNAL Patent: WO 2004011641-A 3 05-FEB-2004;  
Aetex Technology Limited (GB)



Quality: 32.00      EScore: 281  
Matching length: 11      Total length: 11  
Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82      Total Percent Identity: 54.55  
Gaps: 0

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|||||  
179 AAGCTGCCCTCCGCGCGGCTCTCGGCGCTCT

37  
147

Sequence name: rgep2ndb:AB050436

Sequence documentation: 1465 bp mRNA linear PRI 17-JUN-2001

LOCUS AB050436 Homo sapiens BACE mRNA for beta-site APP cleaving enzyme I-476,

DEFINITION complete cds.

VERSION AB050436.1 GI:13568406

KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE 1 Tanahashi, H. and Tabira, T.

AUTHORS

TITLE

Three novel alternatively spliced isoforms of the human beta-site amyloid precursor protein cleaving enzyme (BACE) and their effect on amyloid beta-peptide production

Neurosci. Lett. 307 (1), 9-12 (2001)

JOURNAL

MEDLINE

PUBMED

REFERENCE

AUTHORS

TITLE

Submitted (21-OCT-2000) Hiroshi Tanahashi, National Institute of Neuroscience, Division of Demyelinating Disease and Aging; 4-1-1, Ogawahishashi, Kodaira, Tokyo 187-8551, Japan

(E-mail: tanahashi@ncnp.go.jp, Tel: 81423412711 (ex. 5163), Fax: 81423461747)

location/Qualifiers

FEATURES

source

gene

CDS

1.1465

4.1434

/gene="BACE"

/note="alternative splicing isoform"

/codon\_start=1

/product="beta-site APP cleaving enzyme I-476"

/protein\_id="BAB40931.1"

/db\_xref="GI:13568407"

/translation="MAQALPWLILMAGAVLPAGTONGIRLPRLSGGLGAPLRLP

RTEDPERBERGRGSFVEMVNDLRKSGQGYVEMTGVSPQTLNILLVDGSSNFAVG

AAHPPLHRYVROLSTYRDLRGVYPYTOCKEGELGTLVSIIPHGVTVRANI

AATTSDDKPFINGSNWGLIGLAVARLACGAGPPLNOSVLAASVGSMTIGIDHS

LYNGSLMTPIRREYVYVIVVEINGDLKMDCKEYNDKSYDSGTNLALPKV

PEAAVSKRAASTTEKPPDGFALGEQVLCQAGTTPMNFVPSILTMGVNQSFRI

TLIPQQLRVEDVAISQDCYFAISQSGTVMGAVIMEGFVVFDRARXIGFAV

SACHVEDRTAIVEGPFVTLDMEDCGYNPQTDSESLMTIAYVMAICALFPLPLCL

MVQWMLRCLRQLQHDHPADDISLKL"

Alignment of: us-10-726-967a-1 x AB050436

Alignment segment 1/1: (-)

Quality: 32.00      EScore: 281  
Matching length: 11      Total length: 11

Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82      Total Percent Identity: 54.55  
Gaps: 0

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|||||  
182 AAGCTGCCCTCCGCGCGGCTCTCGGCGCTCT

37  
150

Sequence name: rgep2ndb:AX700449

Sequence documentation: 1470 bp DNA linear PAT 03-APR-2003

LOCUS AX700449 Sequence 4 from Patent WO03012089.

DEFINITION AX700449

VERSION AX700449.1 GI:29536240

KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE 1 Yon, D., Cleasby, A., Bruinzeel, W. D., Masure, S. L., Tickle, I. and Sharif, A.

AUTHORS

TITLE

Crystal structure of beta-site app cleaving enzyme (bace) and use thereof

Patent: WO 03012089-A 4 13-FEB-2003; AsteX Technology Limited (GB) ; JANSSEN PHARMACEUTICA N.V. (BE)

FEATURES

source

1.1470

/organism="Homo sapiens"

/mol\_type="unassigned DNA"

/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX700449

Alignment segment 1/1: (-)

Quality: 32.00      EScore: 281  
Matching length: 11      Total length: 11  
Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82      Total Percent Identity: 54.55  
Gaps: 0

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|||||  
269 AAGCTGCCCTCCGCGCGGCTCTCGGCGCTCT

37  
237

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|||||  
269 AAGCTGCCCTCCGCGCGGCTCTCGGCGCTCT

37  
237

Sequence name: rgep2ndb:AR404163

Sequence documentation: 1503 bp DNA linear PAT 18-DEC-2003

LOCUS AR404163 Sequence 1 from patent US 6627739.

DEFINITION AR404163

VERSION AR404163.1 GI:40152203

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1503)

AUTHORS Anderson, J. P., Bael, G., Doan, M. T., Frigon, N., John, V., Power, M.,

Sinha, S., Tatsuono, G., Tung, J., Wang, S. and McConlogue, L.

beta-secretase enzyme compositions and methods

Patent: US 6627739-A 1 30-SEP-2003;

location/Qualifiers

FEATURES

source

1.1503

/organism="unknown"

/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR404163

Alignment segment 1/1: (-)  
Quality: 32.00  
Matching length: 11  
Total length: 281  
Matching Percent Similarity: 81.82  
Total length: 11  
Total Percent Similarity: 81.82  
Total Percent Identity: 54.55  
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AX700448

Sequence documentation:

LOCUS AX700448 1506 bp DNA linear PAT 03-APR-2003  
DEFINITION Sequence 3 from Patent WO03012089.  
ACCESSION AX700448  
VERSION AX700448.1 GI:29536239

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

TITLE

JOURNAL

FEATURES

source

Alignment of: us-10-726-967a-1 x AX700448 ..

Alignment segment 1/1: (-)

Quality: 32.00  
Matching length: 11  
Total length: 281  
Matching Percent Similarity: 81.82  
Total length: 11  
Total Percent Similarity: 81.82  
Total Percent Identity: 54.55  
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AX823518

Sequence documentation:

LOCUS AX823518 1506 bp DNA linear PAT 11-DEC-2003  
DEFINITION Sequence 8 from Patent EP1340424.  
ACCESSION AX823518  
VERSION AX823518.1 GI:39749972

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

TITLE

JOURNAL

FEATURES  
source  
Location/Qualifiers  
1..1506  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX823518 ..

Alignment segment 1/1: (-)

Quality: 32.00  
Matching length: 11  
Total length: 281  
Matching Percent Similarity: 81.82  
Total length: 11  
Total Percent Similarity: 81.82  
Total Percent Identity: 54.55  
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AF204943

Sequence documentation:

LOCUS AF204943 1506 bp mRNA linear PRI 19-JAN-2000  
DEFINITION Homo sapiens transmembrane aspartic proteinase Asp 2 (BACE1) mRNA,  
complete cds.

ACCESSION

VERSION

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

TITLE

JOURNAL

FEATURES

source

gene  
CDS  
1..1506  
/organism="Homo sapiens"  
/mol\_type="mRNA"  
/db\_xref="taxon:9606"  
1..1506  
/gene="BACE1"  
1..1506  
/note="beta-site APP processing enzyme"  
/codon\_start=1  
/product="transmembrane aspartic proteinase Asp 2"  
/protein\_id="AF204943.1"  
/translation="MAQALPMILLMAGAVLPNAGTQHGIRPLPSGLGAPPLGLRLP  
RTEDEBERBGRGSEVEMVDNLRGSGGGYVEMVGPOTNLIVDTGSSNFAVG  
AAPPLRIHYRQGLSSSTYRDLRGVYVYDTGSGMEGLGTDVSIPLGPNVTVRANI  
AATLSDKFTFNGSGSMILGIDHSLVTSGLMTPIRREMYIVIVRYEINGQDLKM  
GEPNLQSEVLASVGSMTIGLIDHSLVTSGLMTPIRREMYIVIVRYEINGQDLKM  
DCEKYNVYDYSIGTTLNRLPKVFEAAVKSIIKASSTKTPDQDQDQKRAIISGSSGTG  
TTPWNI.FPVIISLYIMGEVNTGFRITILPQOYLRPVEDVATSDQDQKRAIISGSSGTG  
VNGAVIMEGFYVVFDRARKIGFAVAGCHVDEFRTAAVEGPFVTDLMDCGYNIPT  
DSTLTMTIYVMAIALPMLPLCLMVCQWRCRLRQGHDPADDISLTK"

Alignment of: us-10-726-967a-1 x AF204943 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgleupProleuArgSergLYleuGLyGLyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCCCTCCGCGCGCTCCTCGGCTCT 147

Sequence name: rgep2ndb:BD103723

Sequence documentation:

LOCUS BD103723 1527 bp DNA linear PAT 27-AUG-2002  
DEFINITION Beta secretase inhibitor.  
ACCESSION BD103723  
VERSION BD103723.1 GI:22649297  
KEYWORDS WO 0187293-A/6.  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens

REFERENCE 1 (bases 1 to 1527)  
Miyamoto,M., Matsui,J., Fukumoto,H. and Tarui,N.  
TITLE Beta secretase inhibitor  
PATENT: WO 0187293-A 6 22-NOV-2001;  
TAKEDA CHEMICAL INDUSTRIES LTD,MASHOMI MIYAMOTO,JUNJI MATSUI,  
HIROAKI FUKUMOTO,NAOKI TARUI  
COMMENT OS Homo sapiens (human)  
PN WO 0187293-A/6  
PD 22-NOV-2001  
PR 18-MAY-2001 WO 2001JP004144  
PI 19-MAY-2000 JP 00P 152758  
P1 MASHOMI MIYAMOTO,JUNJI MATSUI,HIROAKI FUKUMOTO,NAOKI TARUI  
A61K31/135,A61K31/14,A61K31/165,A61K31/40,A61K31/4453,A61K31/PC  
4164.

PC A61P43/00,A61P25/00,A61P25/16,A61P25/28  
CC Beta secretase inhibitor  
FH Key Location/Qualifiers  
FT source 1..1527  
/organism='Homo sapiens (human)'.  
/location/Qualifiers  
1..1527  
/organism='Homo sapiens'  
/mol\_type='genomic DNA'  
/db\_xref='taxon:9606'

FEATURES  
source 1..1527  
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/location/Qualifiers  
1..1527  
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/mol\_type='genomic DNA'  
/db\_xref='taxon:9606'

Alignment of: us-10-726-967a-1 x BD103723 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	281
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgleupProleuArgSergLYleuGLyGLyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCCCTCCGCGCGCTCCTCGGCTCT 147

Sequence name: rgep2ndb:BD235887

Sequence documentation:

LOCUS BD235887 1977 bp DNA linear PAT 17-JUL-2003

DEFINITION Alzheimer's disease secretase.

ACCESSION BD235887  
VERSION BD235887.1 GI:33045657  
KEYWORDS JP 2002526081-A/3.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE 1 (bases 1 to 1977)  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1 (bases 1 to 1977)  
Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and

Yan,R.

TITLE Alzheimer's disease secretase  
PATENT: JP 2002526081-A 3 20-AUG-2002;  
JOURNAL PHARMACIA AND UROLOGIA CO

COMMENT OS Homo sapiens (human)

PN JP 2002526081-A/3  
PD 20-AUG-2002  
PP 23-SEP-1999 JP 200574268  
PR 24-SEP-1998 US 60/101594

PI MARK E GURNEY,MICHAEL JEROME BIEKOWSKI,ROBERT LEROY PI  
HEINRIKSON,  
PC LUIS A. PARODI,RIQIANG YAN  
PC C12N15/09,A61K45/00,A61P25/28,C07K14/47,C07K16/18,C12N1/15,PC  
C12N1/19,  
PC C12N1/21,C12N5/10,C12N9/64,C12P21/02,C12P21/08,C12Q1/37,G01N33/PC

15, G01N33/50/(C12N1/21,C12R1:19),C12N15/00,C12N5/00 CC  
PC Alzheimer's disease secretase  
FH Key Location/Qualifiers  
FT source 1..1977  
/organism='Homo sapiens (human)'.  
/location/Qualifiers  
1..1977  
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/mol\_type='genomic DNA'  
/db\_xref='taxon:9606'

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source 1..1977  
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/location/Qualifiers  
1..1977  
/organism='Homo sapiens (human)'.  
/mol\_type='genomic DNA'  
/db\_xref='taxon:9606'

Alignment of: us-10-726-967a-1 x BD235887 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	282
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgleupProleuArgSergLYleuGLyGLyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCCCTCCGCGCGCTCCTCGGCTCT 147

Sequence name: rgep2ndb:AR224094

Sequence documentation:

LOCUS AR224094 1977 bp DNA linear PAT 26-SEP-2002  
DEFINITION Sequence 5 from patent US 6440698.  
ACCESSION AR224094  
VERSION AR224094.1 GI:23332754  
KEYWORDS Unknown.  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1977)  
Gurney,M.E., Bienkowski,M.J., Heinrikson,R.L., Parodi,L.A. and

Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses

therefor

PATENT: US 6440698-A 5 27-AUG-2002;  
JOURNAL Location/Qualifiers  
1..1977

FEATURES  
source 1..1977

/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224094 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	282
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
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179 AAGCTGCCCTCCGGCCGGCTCCTCGGCTCT 147

Sequence name: rgep2ndb:AR269225

Sequence documentation:

LOCUS AR269225 1977 bp DNA linear PAT 10-APR-2003  
DEFINITION Sequence 5 from patent US 6500667.  
ACCESSION AR269225  
VERSION AR269225.1 GI:29700193  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1977)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

Yan,R.  
TITLE Aspartyl protease 2 (Asp2) antisease oligonucleotides  
JOURNAL Patent: US 6500667-A 5 31-DEC-2002;  
FEATURES  
source 1. 1977  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269225 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	282
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCTCCGGCCGGCTCCTCGGCTCT 147

Sequence name: rgep2ndb:AR478779

Sequence documentation:

LOCUS AR478779 1977 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 5 from patent US 6699671.  
ACCESSION AR478779  
VERSION AR478779.1 GI:47237499  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1977)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
JOURNAL Patent: US 6699671-A 5 02-MAR-2004;

FEATURES  
source 1. 1977  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478779 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	282
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCTCCGGCCGGCTCCTCGGCTCT 147

Sequence name: rgep2ndb:AR487346

Sequence documentation:

LOCUS AR487346 1977 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 5 from patent US 6706485.  
ACCESSION AR487346  
VERSION AR487346.1 GI:47252444  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1977)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

Yan,R.  
TITLE Method of identifying agents that inhibit APP processing activity  
JOURNAL Patent: US 6706485-A 5 16-MAR-2004;  
FEATURES  
source 1. 1977  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487346 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	282
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCTCCGGCCGGCTCCTCGGCTCT 147

Sequence name: rgep2ndb:AR531985

Sequence documentation:

LOCUS AR531985 1977 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 5 from patent US 6727074.  
ACCESSION AR531985  
VERSION AR531985.1 GI:53920519  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1977)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses



JOURNAL therefor  
 Patent: US 6727074-A 5 27-APR-2004;  
 FEATURES Location/Qualifiers  
 source 1..1977  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531985 ..  
 Alignment segment 1/1: (-)

Quality:	32.00	Score:	282
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
 179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AR540887

Sequence documentation:

LOCUS AR540887 1977 bp DNA linear PAT 08-OCT-2004  
 DEFINITION Sequence 5 from patent US 6737510.  
 ACCESSION AR540887  
 VERSION AR540887.1 GI:53932400

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1977)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses

JOURNAL Patent: US 6737510-A 5 18-MAY-2004;

FEATURES Location/Qualifiers  
 source 1..1977  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540887 ..  
 Alignment segment 1/1: (-)

Quality:	32.00	Score:	282
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
 179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AR560096

Sequence documentation:

LOCUS AR560096 1977 bp DNA linear PAT 08-OCT-2004  
 DEFINITION Sequence 5 from patent US 6753163.  
 ACCESSION AR560096  
 VERSION AR560096.1 GI:53970463

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

REFERENCE 1 (bases 1 to 1977)

AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
 Van,R.  
 TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
 JOURNAL Patent: US 6753163-A 5 22-JUN-2004;  
 FEATURES Location/Qualifiers  
 source 1..1977  
 /organism="unknown"  
 /mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560096 ..  
 Alignment segment 1/1: (-)

Quality:	32.00	Score:	282
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
 179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AX105387

Sequence documentation:

LOCUS AX105387 1977 bp DNA linear PAT 30-APR-2001  
 DEFINITION Sequence 5 from Patent WO0123533.  
 ACCESSION AX105387  
 VERSION AX105387.1 GI:13921512

KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE 1 (bases 1 to 1977)

AUTHORS Gurney,M. and Bienkowski,M.J.

TITLE Alzheimer's disease secretase, app substrates therefor, and uses

JOURNAL Patent: WO 0123533-A 5 05-APR-2001;

FEATURES Location/Qualifiers  
 source 1..1977  
 /organism="Homo sapiens"  
 /mol\_type="unassigned DNA"  
 /db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105387 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	282
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
 179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AX378017

Sequence documentation:

LOCUS AX378017 1977 bp DNA linear PAT 18-MAR-2002  
 DEFINITION Sequence 3 from Patent WO0206306.  
 ACCESSION AX378017  
 VERSION AX378017.1 GI:19574051



therefor  
JOURNAL Patent: US 6440698-A 3 27-AUG-2002;  
FEATURES Location/Qualifiers  
source 1..2070  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224093 ..

Alignment segment 1/1: (-)

Quality:	32.00	Total length:	282
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37  
147

Sequence name: rgep2ndb:AR269224

Sequence documentation:

LOCUS AR269224 2070 bp DNA linear PAT 10-APR-2003  
DEFINITION Sequence 3 from patent US 6500667.  
ACCESSION AR269224  
VERSION AR269224.1 GI:29700192

KEYWORDS

SOURCE

ORGANISM

REFERENCE 1 (bases 1 to 2070)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Aspartyl protease 2 (Asp2) antisense oligonucleotides  
JOURNAL Patent: US 6500667-A 3 31-DEC-2002;  
FEATURES Location/Qualifiers

source 1..2070  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269224 ..

Alignment segment 1/1: (-)

Quality:	32.00	Total length:	282
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37  
147

Sequence name: rgep2ndb:AR478778

Sequence documentation:

LOCUS AR478778 2070 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 3 from patent US 6699671.  
ACCESSION AR478778  
VERSION AR478778.1 GI:47237498

KEYWORDS

SOURCE

ORGANISM

REFERENCE 1 (bases 1 to 2070)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

Van, R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
JOURNAL Patent: US 6699671-A 3 02-MAR-2004;  
FEATURES Location/Qualifiers  
source 1..2070  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478778 ..

Alignment segment 1/1: (-)

Quality:	32.00	Total length:	282
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37  
147

Sequence name: rgep2ndb:AR487345

Sequence documentation:

LOCUS AR487345 2070 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 3 from patent US 6706485.  
ACCESSION AR487345  
VERSION AR487345.1 GI:47252443

KEYWORDS

SOURCE

ORGANISM

REFERENCE 1 (bases 1 to 2070)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and

TITLE Method of identifying agents that inhibit APP processing activity  
JOURNAL Patent: US 6706485-A 3 16-MAR-2004;  
FEATURES Location/Qualifiers

source 1..2070  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487345 ..

Alignment segment 1/1: (-)

Quality:	32.00	Total length:	282
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37  
147

Sequence name: rgep2ndb:AR531984

Sequence documentation:

LOCUS AR531984 2070 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 3 from patent US 6727074.  
ACCESSION AR531984  
VERSION AR531984.1 GI:53920518

KEYWORDS

SOURCE

ORGANISM

REFERENCE 1 (bases 1 to 2070)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
JOURNAL Patent: US 6727074-A 3 27-APR-2004;  
FEATURES Location/Qualifiers  
source 1..2070  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531984 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	282
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AR540886

Sequence documentation:

LOCUS	AR540886	2070 bp	DNA	linear	PAT 08-OCT-2004
DEFINITION	Sequence 3 from patent US 6737510.				
ACCESSION	AR540886				
VERSION	AR540886.1	GI:53932399			
KEYWORDS	.				
SOURCE	Unknown.				
ORGANISM	Unclassified.				
REFERENCE	1 (bases 1 to 2070)				
AUTHORS	Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Van,R.				
TITLE	Alzheimer's disease secretase, APP substrates therefor, and uses thereof				
JOURNAL	Patent: US 6737510-A 3 18-MAY-2004;				
FEATURES	Location/Qualifiers 1..2070 /organism="unknown" /mol_type="genomic DNA"				
source	.				

Alignment of: us-10-726-967a-1 x AR540886 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	282
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AR560095

Sequence documentation:

LOCUS	AR560095	2070 bp	DNA	linear	PAT 08-OCT-2004
DEFINITION	Sequence 3 from patent US 6753163.				
ACCESSION	AR560095				
VERSION	AR560095.1	GI:53970462			
KEYWORDS	.				

SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 2070)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
JOURNAL Patent: US 6753163-A 3 22-JUN-2004;  
FEATURES Location/Qualifiers  
source 1..2070  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560095 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	282
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AX105385

Sequence documentation:

LOCUS	AX105385	2070 bp	DNA	linear	PAT 30-APR-2001
DEFINITION	Sequence 3 from Patent WO0123533.				
ACCESSION	AX105385				
VERSION	AX105385.1	GI:13921511			
KEYWORDS	.				
SOURCE	Homo sapiens (human)				
ORGANISM	Homo sapiens				
REFERENCE	Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.				
AUTHORS	1				
TITLE	Gurney,M. and Bienkowski,M.J.				
JOURNAL	Alzheimer's disease secretase, app substrates therefor, and uses thereof				
FEATURES	Patent: WO 0123533-A 3 05-APR-2001; Pharmacia & Upjohn Company (US) Location/Qualifiers 1..2070 /organism="Homo sapiens" /mol_type="unassigned DNA" /db_xref="taxon:9606"				
source	.				

Alignment of: us-10-726-967a-1 x AX105385 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	282
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AX378015

Sequence documentation:

LOCUS	AX378015	2070 bp	DNA	linear	PAT 08-OCT-2004
DEFINITION	Sequence 3 from patent US 6753163.				
ACCESSION	AX378015				
VERSION	AX378015.1	GI:53970462			
KEYWORDS	.				

LOCUS AX378015 2070 bp DNA linear PAT 18-MAR-2002  
DEFINITION Sequence 1 from Patent WO0206306.  
ACCESSION AX378015  
VERSION AX378015.1 GI:19574050  
KEYWORDS Homo sapiens (human)  
SOURCE Homo sapiens  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
REFERENCE 1  
AUTHORS Yan, R., Tomasselli, A.G., Gurney, M.E., Emmons, T.L., Bienkowski, M.J.  
and Heinrikson, R.L.  
TITLE Substrates and assays for g(b)-secretase activity  
JOURNAL Patent: WO 0206306-A 1 24-JAN-2002;  
PHARMACIA & UPJOHN COMPANY (US)  
FEATURES  
source 1. .2070  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX378015 ..  
Alignment segment 1/1: (-)  
Quality: 32.00  
Matching length: 11  
Matching Percent: 81.82  
Total length: 282  
Total Similarity: 81.82  
Total Percent Identity: 54.55  
Gaps: 0

Alignment:  
27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AX573823

Sequence documentation:  
LOCUS AX573823 2070 bp DNA linear PAT 07-JAN-2003  
DEFINITION Sequence 3 from Patent EP1249498.  
ACCESSION AX573823  
VERSION AX573823.1 GI:27551477  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
REFERENCE 1  
AUTHORS Gurney, M. and Bienkowski, M.J.  
TITLE Alzheimer's disease secretase, app substrates therefor, and uses  
JOURNAL Patent: EP 1249498-A 3 16-OCT-2002;  
PHARMACIA & UPJOHN COMPANY (US)  
FEATURES  
source 1. .2070  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573823 ..  
Alignment segment 1/1: (-)  
Quality: 32.00  
Matching length: 11  
Matching Percent: 81.82  
Total length: 282  
Total Similarity: 81.82  
Total Percent Identity: 54.55  
Gaps: 0

Alignment:  
27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AX700447

Sequence documentation:  
LOCUS AX700447 2070 bp DNA linear PAT 03-APR-2003  
DEFINITION Sequence 2 from Patent WO03012089.  
ACCESSION AX700447  
VERSION AX700447.1 GI:29536238  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
REFERENCE 1  
AUTHORS Von, J., Cleasby, A., Bruinzeel, W.D., Measure, S.L., Tickle, I. and  
Shariff, A.  
TITLE Crystal structure of beta-site app cleaving enzyme (bace) and use  
thereof  
JOURNAL Patent: WO 03012089-A 2 13-FEB-2003;  
Astell Technology Limited (GB) ; JANSSEN PHARMACEUTICA N.V. (BE)  
FEATURES  
source 1. .2070  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX700447 ..  
Alignment segment 1/1: (-)  
Quality: 32.00  
Matching length: 11  
Matching Percent: 81.82  
Total length: 282  
Total Similarity: 81.82  
Total Percent Identity: 54.55  
Gaps: 0

Alignment:  
27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AF200343

Sequence documentation:  
LOCUS AF200343 2070 bp mRNA linear PRI 12-DEC-1999  
DEFINITION Homo sapiens chromosome 11 aspartyl protease 2 mRNA, complete cds.  
ACCESSION AF200343  
VERSION AF200343.1 GI:6561813  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
REFERENCE 1 (bases 1 to 2070)  
AUTHORS Yan, R., Bienkowski, M.J., Shuck, M.E., Miao, H., Torg, M.C.,  
Paulley, A.M., Brashers, J.R., Stratman, N.C., Mathews, W.R., Buhl, A.E.,  
Carter, D.B., Tomasselli, A.G., Parodi, L.A., Heinrikson, R.L. and  
Gurney, M.E.  
TITLE Membrane-anchored aspartyl protease with Alzheimer's disease  
beta-secretase activity  
JOURNAL Nature 402 (6761), 533-537 (1999)  
MEDLINE 20057170  
PUBMED 10591213  
REFERENCE 2 (bases 1 to 2070)  
AUTHORS Bienkowski, M.J., Shuck, M.E., Slightom, J.L. and Drong, R.F.  
TITLE Direct Submision  
JOURNAL Submitted (29-OCT-1999) Genomics Research, PharmaciaUpjohn, 301  
Henrietta, Kalamazoo, MI 49007, USA  
FEATURES  
Location/Qualifiers

## source

1. .2070  
/organism="Homo sapiens"  
/mol\_type="mRNA"  
/db\_xref="taxon:9606"  
/chromosome="11"  
/map="11q23.3-24.1"  
1. .1506  
/codon\_start=1  
/product="aspartyl protease 2"  
/protein\_id="AAPI7079.1"  
/db\_xref="GI:6561814"

## CDS

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AAPPLHRYROROLSTVYDLRGVYVPTQGMKGELGDLVSI PHGNVTVRANI  
AATSDKPRFNGSNMGEGLGLAVARIAPDSDLPPPSLVKOTHPNLFSLCLGA  
GPELNSVLAIVSGSMITIGTSHLYTGSJMTPTIRREYTVIIVRVEINQDLKM  
DCKEYNDKSIDVSGTINLRLPKRVEPAVKSIKAASTEKPEDFGFWLGQLVCWAG  
TTPWNI FPIVSLYLMGVTNQSFRITILPOQYLRPYEDVATSDDCYKPAISQSSGT  
VMGAVMEGFYVDFRARKIGFVSAACHDEFRTAAVAGPVTLMDEKCGYNIPQT  
DESTLMTIAYVMAICALFWLPCLMVCQWRCLRCRQQRQHDPAADISLLK"

Alignment of: us-10-726-967a-1 x AF200343 ..

Alignment segment 1/1: (-)

Matching length:	32.00	11	Total length:	282
Matching Percent	11	11	Matching Percent	11
Similarity:	81.82	81.82	Identity:	54.55
Total Similarity:	81.82	0	Total Identity:	54.55
Gaps:	0			

Alignment:

27 ArgleupProleuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AR178469

Sequence documentation:

LOCUS AR178469 2541 bp DNA linear PAT 20-APR-2002  
DEFINITION Sequence 1 from patent US 6319689.  
ACCESSION AR178469  
VERSION AR178469.1 GI:20219607  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 2541)  
AUTHORS Powell,D.J., Chapman,C.G., Murphy,K. and Smith,T.S.  
TITLE ASP2  
JOURNAL Patent: US 6319689-A 1 20-NOV-2001;  
FEATURES  
source  
1. .2541  
/organism="unknown"  
/mol\_type="unassigned DNA"

Alignment of: us-10-726-967a-1 x AR178469 ..

Alignment segment 1/1: (-)

Matching length:	32.00	11	Total length:	282
Matching Percent	11	11	Matching Percent	11
Similarity:	81.82	81.82	Identity:	54.55
Total Similarity:	81.82	0	Total Identity:	54.55
Gaps:	0			

Alignment:

27 ArgleupProleuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:E50816

Sequence documentation:

LOCUS E50816 2541 bp DNA linear PAT 18-JUN-2001  
DEFINITION Aspartate proteinase ASP2.  
ACCESSION E50816  
VERSION E50816.1 GI:13023199  
KEYWORDS JP 2000060579-A/1.  
SOURCE unidentified  
ORGANISM unidentified

REFERENCE 1 (bases 1 to 2541)  
AUTHORS David,J.P., Conrad,G.C., Kay,M. and Trudy,S.S.  
TITLE Aspartate proteinase ASP2  
JOURNAL Patent: JP 2000060579-A 1 29-FEB-2000;  
SMITHKLINE BEECHAM CORP

COMMENT

OS Unidentified  
PN JP 2000060579-A/1  
PD 29-FEB-2000  
PE 03-AUG-1999 JP 1999219665  
PR 28-JAN-1997 GB 9701684.4  
PI DAVID J POWERU,CONRAD G CHAPPURMAN,KAY MAFI,TRUDY S SMITH PC  
C12N15/09,A61K31/7088,A61K38/46,A61K39/00,A61K39/395, PC  
A61K39/395,A61K48/00,  
PC A61P25/28,A61P35/00,A61P43/00,C07K16/40,C12N1/15,C12N1/19, PC  
C12N1/21,  
PC C12N5/10,C12N9/64,C12Q1/37,G01N33/15,G01N33/50,G01N33/53, PC  
G01N33/566,  
PC G01N33/577//C12P21/08,C12N15/00,A61K37/54,C12N5/00 CC  
Strandedness: Single;  
CC Topology: Linear;  
FH Key location/Qualifiers  
FT source 1. .2541  
/organism='Unidentified'.  
location/Qualifiers  
1. .2541  
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/db\_xref="taxon:32644"

Alignment of: us-10-726-967a-1 x E50816 ..

Alignment segment 1/1: (-)

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Matching Percent	11	11	Matching Percent	11
Similarity:	81.82	81.82	Identity:	54.55
Total Similarity:	81.82	0	Total Identity:	54.55
Gaps:	0			

Alignment:

27 ArgleupProleuArgSerGlyLeuGlyGlyAla 37  
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179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147

Sequence name: rgep2ndb:AX002655

Sequence documentation:

LOCUS AX002655 2541 bp DNA linear PAT 10-MAR-2000  
DEFINITION Sequence 1 from Patent EP0855444.  
ACCESSION AX002655  
VERSION AX002655.1 GI:7242133  
KEYWORDS  
SOURCE unidentified  
ORGANISM unidentified

REFERENCE 1 (bases 1 to 2541)  
AUTHORS Murphy,K. and Chapman,C.G.  
TITLE Aspartic proteinase 2 (ASP2)  
JOURNAL Patent: EP 0855444-A 1 29-JUL-1998;  
SMITHKLINE BEECHAM PLC (GB); SMITHKLINE BEECHAM CORP (US)  
location/Qualifiers

[illegible]

REFERENCE		1 (bases 1 to 3252)	
AUTHORS	Tang J.J.N., Lin X., Koelsch G. and Hong L.		
TITLE	Catalytically active recombinant memapsin and methods of use thereof		
JOURNAL	Patent: US 6545127-A 1 08-APR-2003;		
FEATURES	Location/Qualifiers		
source	1..3252 /organism="unknown" /mol_type="genomic DNA"		
Alignment of: us-10-726-967a-1 x AR305033 ..			
Alignment segment 1/1: (-)			
	Quality:	32.00	Escore: 283
Matching Length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		
Alignment:			
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla			37
::::::::::::::::::::			
140 AAGCTCGCCCTCCGGCCGGCCTCTCGGCCTCT			108
Sequence name: rgep2ndb:AX063201			
Sequence documentation:			
LOCUS	AX063201	3252 bp	DNA linear PAT 24-JAN-2001
DEFINITION	Sequence 1 from Patent WO0100663.		
ACCESSION	AX063201		
VERSION	AX063201.1 GI:12541045		
REFERENCE			
AUTHORS	Tang,J.J., Hong,L. and Ghosh,A.K.		
TITLE	Inhibitors of memapsin 2 and use thereof		
JOURNAL	Patent: WO 0100665-A 1 04-JAN-2001; Oklahoma Medical Research Foundation (US) ; THE BOARD OF TRUSTEES OF THE UNIVERSITY OF ILLINOIS (US)		
FEATURES	Location/Qualifiers		
source	1..3252 /organism="Homo sapiens" /mol_type="unassigned DNA" /db_xref="taxon:9606"		
Alignment of: us-10-726-967a-1 x AX062111 ..			
Alignment segment 1/1: (-)			
	Quality:	32.00	Escore: 283
Matching Length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		
Alignment:			
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla			37
::::::::::::::::::::			
140 AAGCTCGCCCTCCGGCCGGCCTCTCGGCCTCT			108
Sequence name: rgep2ndb:AX063201			
Sequence documentation:			
LOCUS	AX063201	3252 bp	DNA linear PAT 24-JAN-2001
DEFINITION	Sequence 1 from Patent WO0100663.		
ACCESSION	AX063201		
VERSION	AX063201.1 GI:12541045		

KEYWORDS  
SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
1 Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

AUTHORS Tang,J.J., Lin,X. and Koelsch,G.  
TITLE Catalytically active recombinant memapsin and methode of use there  
of

JOURNAL Patent: WO 010663-A 1 04-JAN-2001;  
Oklahoma Medical Research Foundation (US)

FEATURES  
source 1. .3252  
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/mol\_type="unassigned DNA"  
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Alignment of: us-10-726-967a-1 x AX063201 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	283
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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140 AAGCTGCCCCCTCCGGCGGGCTCTCGGGCTCT 108
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Sequence name: rgep2ndb:AX472368

Sequence documentation:

LOCUS AX472368 3252 bp DNA linear PAT 09-AUG-2002

DEFINITION Sequence 1 from Patent WO02053594.

ACCESSION AX472368

VERSION AX472368.1 GI:22207364

KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
1 Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

AUTHORS Ghosh,A.K., Koelsch,G. and Tang,J.J.  
TITLE Inhibitors of memapsin 2 and use thereof  
JOURNAL Patent: WO 02053594-A 1 11-JUL-2002;  
OKLAHOMA MED RES FOUND (US); TRUSTEES OF THE UNIVERSITY OF ILLINOIS  
(US)

FEATURES  
source 1. .3252  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX472368 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	283
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
140 AAGCTGCCCCCTCCGGCGGGCTCTCGGGCTCT 108
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Sequence name: rgep2ndb:AX700453

Sequence documentation:

LOCUS AX700453 3252 bp DNA linear PAT 03-APR-2003

DEFINITION Sequence 8 from Patent WO03012089.

ACCESSION AX700453

VERSION AX700453.1 GI:29536242

KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
1 Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

AUTHORS Yon,J., Claasby,A., Bruinzeel,W.D., Masure,S.L., Tickle,I. and  
Sharif,A.  
TITLE Crystal structure of beta-site app cleaving enzyme (bace) and use  
thereof

JOURNAL Patent: WO 03012089-A 8 13-FEB-2003;  
Aetex Technology Limited (GB); JANSSEN PHARMACEUTICA N.V. (BE)

FEATURES  
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/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX700453 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	283
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
140 AAGCTGCCCCCTCCGGCGGGCTCTCGGGCTCT 108
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Sequence name: rgep2ndb:AF200193

Sequence documentation:

LOCUS AF200193 3252 bp mRNA linear PRI 16-FEB-2000

DEFINITION Homo sapiens memapsin 2 mRNA, partial cds.

ACCESSION AF200193

VERSION AF200193.1 GI:6470292

KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
1 Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

AUTHORS Lin,X., Koelsch,G., Wu,S., Downs,D., Daehli,A. and Tang,J.  
TITLE Human aspartic protease memapsin 2 cleaves the beta-secretase site  
of beta-amyloid precursor protein

JOURNAL Proc. Natl. Acad. Sci. U.S.A. 97 (4), 1456-1460 (2000)

REFERENCE MEDLINE  
PUBMED 10677483

AUTHORS Lin,X., Koelsch,G. and Tang,J.  
TITLE Direct Submision

JOURNAL Submitted (28-OCT-1999) Protein Studies Program, Oklahoma Medical  
Research Foundation, 825 N.E. 13th Street, Oklahoma City, OK 73104,  
USA

FEATURES  
source 1. .3252  
/organism="Homo sapiens"  
/mol\_type="mRNA"  
/db\_xref="taxon:9606"  
/function="cleaves beta-secretase site of beta-amyloid

CDS





/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269235 ..

Alignment segment 1/1: (+)

Quality:	28.00	Total length:	295
Matching length:	12		16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
|||||  
CGCTTGCATGTGCACATGAGTTCAGACGCGCGGTGGAAGGCC 1217

Sequence name: rgep2ndb:AR478790

Sequence documentation:

LOCUS AR478790 1278 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 27 from patent US 6699671.  
ACCESSION AR478790  
VERSION AR478790.1 GI:47237510  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1278)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor  
JOURNAL Patent: US 6699671-A 27 02-MAR-2004;  
FEATURES  
source 1..1278  
Location/Qualifiers  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478790 ..

Alignment segment 1/1: (+)

Quality:	28.00	Total length:	295
Matching length:	12		16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
|||||  
CGCTTGCATGTGCACATGAGTTCAGACGCGCGGTGGAAGGCC 1217

Sequence name: rgep2ndb:AR487356

Sequence documentation:  
LOCUS AR487356 1278 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 27 from patent US 6706485.  
ACCESSION AR487356  
VERSION AR487356.1 GI:47252454  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1278)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
TITLE Method of identifying agents that inhibit APP processing activity  
JOURNAL Patent: US 6706485-A 27 16-MAR-2004;

FEATURES  
source 1..1278  
Location/Qualifiers  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487356 ..

Alignment segment 1/1: (+)

Quality:	28.00	Total length:	295
Matching length:	12		16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
|||||  
CGCTTGCATGTGCACATGAGTTCAGACGCGCGGTGGAAGGCC 1217

Sequence name: rgep2ndb:AR531996

Sequence documentation:

LOCUS AR531996 1278 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 27 from patent US 6727074.  
ACCESSION AR531996  
VERSION AR531996.1 GI:53920530  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1278)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor  
JOURNAL Patent: US 6727074-A 27 27-APR-2004;  
FEATURES  
source 1..1278  
Location/Qualifiers  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531996 ..

Alignment segment 1/1: (+)

Quality:	28.00	Total length:	295
Matching length:	12		16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
|||||  
CGCTTGCATGTGCACATGAGTTCAGACGCGCGGTGGAAGGCC 1217

Sequence name: rgep2ndb:AR540897

Sequence documentation:  
LOCUS AR540897 1278 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 27 from patent US 6737510.  
ACCESSION AR540897  
VERSION AR540897.1 GI:53932410  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1278)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.

TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof  
JOURNAL Patent: US 6737510-A 27 18-MAY-2004;  
FEATURES Location/Qualifiers  
source 1. 1278  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540897 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	295
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Gaps: 1

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
|||||  
1170 CGCTTGCCATGTCAGATGAGTTCAAGCGGCGGTGAAGGCC 1217

Sequence name: rgep2ndb:AR560107

Sequence documentation:

LOCUS AR560107 1278 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 27 from Patent US 6753163.  
ACCESSION AR560107  
VERSION AR560107.1 GI:53970474

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

1 (bases 1 to 1278)  
Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Van,R.

JOURNAL Alzheimer's disease secretase, APP substrates therefor, and uses thereof  
Patent: US 6753163-A 27 22-JUN-2004;  
FEATURES Location/Qualifiers  
source 1. 1278  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560107 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	295
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Gaps: 1

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
|||||  
1170 CGCTTGCCATGTCAGATGAGTTCAAGCGGCGGTGAAGGCC 1217

Sequence name: rgep2ndb:AX105409

Sequence documentation:

LOCUS AX105409 1278 bp DNA linear PAT 30-APR-2001  
DEFINITION Sequence 27 from Patent WO0123533.  
ACCESSION AX105409  
VERSION AX105409.1 GI:13921523

KEYWORDS

SOURCE

ORGANISM Homo sapiens (human)  
Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

REFERENCE 1 Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.

AUTHORS

1 Gurney,M. and Bienkowski,M.J.

JOURNAL Alzheimer's disease secretase, app substrates therefor, and uses thereof  
Patent: WO 0123533-A 27 05-APR-2001;  
Pharmacia & Upjohn Company (US)  
FEATURES Location/Qualifiers  
source 1. 1278  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105409 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	295
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Gaps: 1

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
|||||  
1170 CGCTTGCCATGTCAGATGAGTTCAAGCGGCGGTGAAGGCC 1217

Sequence name: rgep2ndb:AX573847

Sequence documentation:

LOCUS AX573847 1278 bp DNA linear PAT 07-JAN-2003  
DEFINITION Sequence 27 from Patent EP1249498.  
ACCESSION AX573847  
VERSION AX573847.1 GI:27551489

KEYWORDS

SOURCE

ORGANISM

Homo sapiens (human)  
Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.

REFERENCE

1 Gurney,M. and Bienkowski,M.J.

JOURNAL Alzheimer's disease secretase, app substrates therefor, and uses thereof  
Patent: EP 1249498-A 27 16-OCT-2002;  
Pharmacia & Upjohn Company (US)  
FEATURES Location/Qualifiers  
source 1. 1278  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573847 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	295
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Gaps: 1

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
|||||  
1170 CGCTTGCCATGTCAGATGAGTTCAAGCGGCGGTGAAGGCC 1217

Sequence name: rgep2ndb:CQ772942

Sequence documentation:

LOCUS CQ772942 1368 bp DNA linear PAT 04-MAR-2004

DEFINITION Sequence 7 from Patent WO2004011641.

ACCESSION CO772942

VERSION CO772942.1 GI:45126407

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

1 Vuillard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and

Shah,A.

TITLE

Crystal structure of beta-site app-cleaving enzyme (bace)

mutantand uses thereof

Patent: WO 2004011641-A 7 05-FEB-2004;

Astex Technology Limited (GB)

FEATURES

source

1. 1368

/organism="synthetic construct"

/mol\_type="unassigned DNA"

/db\_xref="taxon:32630"

/note="DNA sequence coding for the BACE WT R57K."

Alignment of: us-10-726-967a-1 x CO772942 ..

Alignment segment 1/1: (-)

Matching length: 28.00

Matching Percent Similarity: 81.82

Total length: 11

Total Percent Identity: 45.45

Gaps: 0

Score: 295

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla

185 AAGCTGCGCTTCGCGCGCGCTCTCGGCGCTCT

153

Sequence name: rgep2ndb:CO772950

Sequence documentation:

LOCUS

DEFINITION

ACCESSION

VERSION

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

1 Vuillard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and

Shah,A.

TITLE

Crystal structure of beta-site app-cleaving enzyme (bace)

mutantand uses thereof

Patent: WO 2004011641-A 15 05-FEB-2004;

Astex Technology Limited (GB)

FEATURES

source

1. 1386

/organism="synthetic construct"

/mol\_type="unassigned DNA"

/db\_xref="taxon:32630"

/note="DNA sequence coding for the BACE N->Q R57K."

Alignment of: us-10-726-967a-1 x CO772950 ..

Alignment segment 1/1: (-)

Matching length: 28.00

Matching Percent Similarity: 81.82

Total length: 11

Total Percent Identity: 45.45

Gaps: 0

Score: 295

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla

185 AAGCTGCGCTTCGCGCGCGCTCTCGGCGCTCT

37

Sequence name: rgep2ndb:AR178470

Sequence documentation:

LOCUS

DEFINITION

ACCESSION

VERSION

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

TITLE

JOURNAL

FEATURES

source

1. 2370

/organism="unknown"

/mol\_type="unassigned DNA"

Alignment of: us-10-726-967a-1 x AR178470 ..

Alignment segment 1/1: (+)

Matching length: 28.00

Matching Percent Similarity: 83.33

Total length: 12

Total Percent Identity: 62.50

Gaps: 1

Score: 296

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAlaPro

1083 CGCTTGCCATGTCACATGATTCAGACGCGCGCTGAGAGCCC

1130

Sequence name: rgep2ndb:E50817

Sequence documentation:

LOCUS

DEFINITION

ACCESSION

VERSION

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

1 (bases 1 to 2370)

David,J.P., Conrad,G.C., Kay,M. and Trudy,S.S.

TITLE

Aspartate proteinase ASP2

Patent: JP 2000060579-A 2 29-FEB-2000;

SMITHKLINE BEECHAM CORP

COMMENT

OS

PN

PD

PF

PI

PC

PC

PC

PC

PC

PC

PC

PC

PC

PC

PC

PC

PC

PC

PC

Quality:	27.00	Escore:	299
Matching length:	12	Total length:	12

Matching Percent Similarity: 66.67 Matching Percent Identity: 50.00  
Total Percent Similarity: 66.67 Total Percent Identity: 50.00  
Gaps: 0

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyAlaPro 38  
1562 AGGGAACCCACCCAGATGTGTCCAGGGGCGTCTCCA 1527

Sequence name: rgep2ndb:AR224095

Sequence documentation: 2043 bp DNA linear PAT 26-SEP-2002

LOCUS AR224095  
DEFINITION Sequence 7 from patent US 6440698.  
ACCESSION AR224095  
VERSION AR224095.1 GI:23332755  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unclassified.  
REFERENCE 1 (bases 1 to 2043)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor

JOURNAL Patent: US 6440698-A 7 27-AUG-2002;  
FEATURES Location/Qualifiers  
source 1..2043  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224095 ..

Alignment segment 1/1: (-)

Quality: 27.00 BaseScore: 299  
Matching length: 12 Total length: 12  
Matching Percent Similarity: 66.67 Matching Percent Identity: 50.00  
Total Percent Similarity: 66.67 Total Percent Identity: 50.00  
Gaps: 0

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyAlaPro 38  
1562 AGGGAACCCACCCAGATGTGTCCAGGGGCGTCTCCA 1527

Sequence name: rgep2ndb:AR269226

Sequence documentation: 2043 bp DNA linear PAT 10-APR-2003

LOCUS AR269226  
DEFINITION Sequence 7 from patent US 6500667.  
ACCESSION AR269226  
VERSION AR269226.1 GI:29700194  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unclassified.  
REFERENCE 1 (bases 1 to 2043)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
TITLE Apatinyl protease 2 (app2) antisense oligonucleotides  
JOURNAL Patent: US 6500667-A 7 31-DEC-2002;  
FEATURES Location/Qualifiers  
source 1..2043  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269226 ..

Alignment segment 1/1: (-)

Quality: 27.00 BaseScore: 299  
Matching length: 12 Total length: 12  
Matching Percent Similarity: 66.67 Matching Percent Identity: 50.00  
Total Percent Similarity: 66.67 Total Percent Identity: 50.00  
Gaps: 0

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyAlaPro 38  
1562 AGGGAACCCACCCAGATGTGTCCAGGGGCGTCTCCA 1527

Sequence name: rgep2ndb:AR478780

Sequence documentation: 2043 bp DNA linear PAT 14-MAY-2004

LOCUS AR478780  
DEFINITION Sequence 7 from patent US 6699671.  
ACCESSION AR478780  
VERSION AR478780.1 GI:47237500  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unclassified.  
REFERENCE 1 (bases 1 to 2043)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor

JOURNAL Patent: US 6699671-A 7 02-MAR-2004;  
FEATURES Location/Qualifiers  
source 1..2043  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478780 ..

Alignment segment 1/1: (-)

Quality: 27.00 BaseScore: 299  
Matching length: 12 Total length: 12  
Matching Percent Similarity: 66.67 Matching Percent Identity: 50.00  
Total Percent Similarity: 66.67 Total Percent Identity: 50.00  
Gaps: 0

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyAlaPro 38  
1562 AGGGAACCCACCCAGATGTGTCCAGGGGCGTCTCCA 1527

Sequence name: rgep2ndb:AR487347

Sequence documentation: 2043 bp DNA linear PAT 14-MAY-2004

LOCUS AR487347  
DEFINITION Sequence 7 from patent US 6706485.  
ACCESSION AR487347  
VERSION AR487347.1 GI:47252445  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unclassified.  
REFERENCE 1 (bases 1 to 2043)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
TITLE Method of identifying agents that inhibit APP processing activity  
JOURNAL Patent: US 6706485-A 7 16-MAR-2004;  
FEATURES Location/Qualifiers  
source 1..2043  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487347 ..

## Alignment segment 1/1: (-)

Quality:	27.00	Score:	299
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAlaPro 38  
1562 AGGGAACCAACCAGATGTGTCTCCAGGGGCGTCTCCA 1527

Sequence name: rgep2ndb:AR531986

## Sequence documentation:

LOCUS AR531986 2043 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 7 from patent US 6727074.  
ACCESSION AR531986  
VERSION AR531986.1 GI:53920520  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 2043)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor  
JOURNAL Patent: US 6727074-A 7 27-APR-2004;  
FEATURES Location/Qualifiers  
source 1..2043  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531986 ..

## Alignment segment 1/1: (-)

Quality:	27.00	Score:	299
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAlaPro 38  
1562 AGGGAACCAACCAGATGTGTCTCCAGGGGCGTCTCCA 1527

Sequence name: rgep2ndb:AR540888

## Sequence documentation:

LOCUS AR540888 2043 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 7 from patent US 6737510.  
ACCESSION AR540888  
VERSION AR540888.1 GI:53932401  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 2043)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses thereof  
JOURNAL Patent: US 6737510-A 7 18-MAY-2004;  
FEATURES Location/Qualifiers  
source 1..2043  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540888 ..

## Alignment segment 1/1: (-)

Quality:	27.00	Score:	299
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAlaPro 38  
1562 AGGGAACCAACCAGATGTGTCTCCAGGGGCGTCTCCA 1527

Sequence name: rgep2ndb:AR560097

## Sequence documentation:

LOCUS AR560097 2043 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 7 from patent US 6753163.  
ACCESSION AR560097  
VERSION AR560097.1 GI:53970464  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.

REFERENCE 1 (bases 1 to 2043)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses therefor  
JOURNAL Patent: US 6753163-A 7 22-JUN-2004;  
FEATURES Location/Qualifiers  
source 1..2043  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560097 ..

## Alignment segment 1/1: (-)

Quality:	27.00	Score:	299
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAlaPro 38  
1562 AGGGAACCAACCAGATGTGTCTCCAGGGGCGTCTCCA 1527

Sequence name: rgep2ndb:AX105389

## Sequence documentation:

LOCUS AX105389 2043 bp DNA linear PAT 30-APR-2001  
DEFINITION Sequence 7 from Patent WO0123533.  
ACCESSION AX105389  
VERSION AX105389.1 GI:13921513  
KEYWORDS  
SOURCE Mus musculus (house mouse)  
ORGANISM Mus musculus

REFERENCE 1  
AUTHORS Gurney,M. and Bienkowski,M.J.  
TITLE Alzheimer's disease secretase, app substrates therefor, and uses thereof  
JOURNAL Patent: WO 0123533-A 7 05-APR-2001;  
Pharmacia & Upjohn Company (US)





PR 23-SEP-1999 JP 2000574268  
PR 24-SEP-1998 US 60/101594  
PI MARK E GURNEY, MICHAEL JEROME BIENKOWSKI, ROBERT LEROY PI  
HEINRIKSON,  
PI LUIS A PARODI, RIOIANG YAN  
PC C12N15/09, A61K45/00, A61P25/28, C07K14/47, C07K16/18, C12N1/15, PC  
C12N1/19,  
PC  
C12N1/21, C12N5/10, C12N9/64, C12P21/02, C12P21/08, C12Q1/37, G01N33/15,  
G01N33/50// (C12N1/21, C12R1:19), C12N15/00, C12N5/00 CC  
PC G01N33/50// (C12N1/21, C12R1:19), C12N15/00, C12N5/00 CC  
Alzheimer's disease secretase  
FH Key Location/Qualifiers  
FT source 1. 1278  
FT Location/Qualifiers  
1. 1278  
/organism="Homo sapiens (human)"  
/mol\_type="genomic DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x BD235898 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgserglyLeuglyGlyAlaPro 38  
||||:|||||  
242 AGGAAGGGGTGGGGGCGACGACCC 219

Sequence name: rgep2ndb:AR224104

Sequence documentation:

LOCUS AR224104 1278 bp DNA linear PAT 26-SEP-2002  
DEFINITION Sequence 27 from patent US 6440698.  
ACCESSION AR224104  
VERSION AR224104.1 GI:23332764  
KEYWORDS  
SOURCE  
ORGANISM Unknown.  
Unclassified.  
REFERENCE 1 (bases 1 to 1278)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
Patent: US 6440698-A 27 27-AUG-2002;  
location/Qualifiers  
1. 1278  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR224104 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgserglyLeuglyGlyAlaPro 38  
||||:|||||

242 AGGAAGGGGTGGGGGCGACGACCC 219

Sequence name: rgep2ndb:AR269235

Sequence documentation:

LOCUS AR269235 1278 bp DNA linear PAT 10-APR-2003  
DEFINITION Sequence 27 from patent US 6500667.  
ACCESSION AR269235  
VERSION AR269235.1 GI:29700203  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
Unclassified.  
REFERENCE 1 (bases 1 to 1278)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Aspartyl protease 2 (Asp2) antisense oligonucleotides  
Patent: US 6500667-A 27 31-DEC-2002;  
location/Qualifiers  
1. 1278  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR269235 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgserglyLeuglyGlyAlaPro 38  
||||:|||||  
242 AGGAAGGGGTGGGGGCGACGACCC 219

Sequence name: rgep2ndb:AR478790

Sequence documentation:

LOCUS AR478790 1278 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 27 from patent US 6699671.  
ACCESSION AR478790  
VERSION AR478790.1 GI:47237510  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
Unclassified.  
REFERENCE 1 (bases 1 to 1278)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
Patent: US 6699671-A 27 02-MAR-2004;  
location/Qualifiers  
1. 1278  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR478790 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
||||:|||||  
242 AGGAAGCGGTGGCGGCAGCACCC

38  
219

Sequence name: rgep2ndb:AR487356

Sequence documentation:

LOCUS AR487356 1278 bp DNA linear PAT 14-MAY-2004  
DEFINITION Sequence 27 from patent US 6706485.  
ACCESSION AR487356  
VERSION AR487356.1 GI:47252454  
KEYWORDS  
SOURCE  
ORGANISM Unknown.  
UNCLASSIFIED.

REFERENCE 1 (bases 1 to 1278)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Method of identifying agents that inhibit APP processing activity  
JOURNAL Patent: US 6706485-A 27 16-MAR-2004;  
FEATURES  
source  
1..1278  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR487356 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
||||:|||||  
242 AGGAAGCGGTGGCGGCAGCACCC

38  
219

Sequence name: rgep2ndb:AR531996

Sequence documentation:

LOCUS AR531996 1278 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 27 from patent US 6727074.  
ACCESSION AR531996  
VERSION AR531996.1 GI:53920530  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
UNCLASSIFIED.

REFERENCE 1 (bases 1 to 1278)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
therefor  
JOURNAL Patent: US 6727074-A 27 27-APR-2004;  
FEATURES  
source  
1..1278  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR531996 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
||||:|||||  
242 AGGAAGCGGTGGCGGCAGCACCC

38  
219

Sequence name: rgep2ndb:AR540897

Sequence documentation:

LOCUS AR540897 1278 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 27 from patent US 6737510.  
ACCESSION AR540897  
VERSION AR540897.1 GI:53932410  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
UNCLASSIFIED.

REFERENCE 1 (bases 1 to 1278)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
thereof  
JOURNAL Patent: US 6737510-A 27 18-MAY-2004;  
FEATURES  
source  
1..1278  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR540897 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
||||:|||||  
242 AGGAAGCGGTGGCGGCAGCACCC

38  
219

Sequence name: rgep2ndb:AR560107

Sequence documentation:

LOCUS AR560107 1278 bp DNA linear PAT 08-OCT-2004  
DEFINITION Sequence 27 from patent US 6753163.  
ACCESSION AR560107  
VERSION AR560107.1 GI:53970474  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
UNCLASSIFIED.

REFERENCE 1 (bases 1 to 1278)  
AUTHORS Gurney,M.E., Bienkowski,M.J., Heinrichson,R.L., Parodi,L.A. and  
Yan,R.  
TITLE Alzheimer's disease secretase, APP substrates therefor, and uses  
thereof  
JOURNAL Patent: US 6753163-A 27 22-JUN-2004;  
FEATURES  
source  
1..1278  
/organism="unknown"  
/mol\_type="genomic DNA"

Alignment of: us-10-726-967a-1 x AR560107 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50

Total Percent Similarity: 87.50 Total Percent Identity: 62.50  
Gaps: 0

## Alignment:

31 ArgSerGlyLeuGlyAlaPro 38  
||||:|||||:|||||  
242 AGGAAGGGGTGGGGGCGACACCC 219

Sequence name: rgep2ndb:AX105409

Sequence documentation: 1278 bp DNA linear PAT 30-APR-2001

LOCUS AX105409  
DEFINITION Sequence 27 from Patent WO0123533.  
ACCESSION AX105409  
VERSION AX105409.1 GI:13921523  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1 Gurney, M. and Bienkowski, M.J.  
AUTHORS Alzheimer's disease secretase, app substrates therefor, and uses  
TITL therefor  
JOURNAL Patent: WO 0123533-A 27 05-APR-2001;  
Pharmacia & Upjohn Company (US)

FEATURES  
source  
1. .1278  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX105409 ..

Alignment segment 1/1: (-)

	Quality:	26.00	Score:	302
Matching length:	8		8	
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50	Total Percent Identity:	62.50	
Gaps:	0			

## Alignment:

31 ArgSerGlyLeuGlyAlaPro 38  
||||:|||||:|||||  
242 AGGAAGGGGTGGGGGCGACACCC 219

Sequence name: rgep2ndb:AX573847

Sequence documentation: 1278 bp DNA linear PAT 07-JAN-2003

LOCUS AX573847  
DEFINITION Sequence 27 from Patent EP1249498.  
ACCESSION AX573847  
VERSION AX573847.1 GI:27551489  
KEYWORDS  
SOURCE Homo sapiens (human)  
ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.

REFERENCE 1 Gurney, M. and Bienkowski, M.J.  
AUTHORS Alzheimer's disease secretase, app substrates therefor, and uses  
TITL therefor  
JOURNAL Patent: BP 1249498-A 27 16-OCT-2002;  
Pharmacia & Upjohn Company (US)

FEATURES  
source  
1. .1278  
/organism="Homo sapiens"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:9606"

Alignment of: us-10-726-967a-1 x AX573847 ..

Alignment segment 1/1: (-)

	Quality:	26.00	Score:	302
Matching length:	8		8	
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50	Total Percent Identity:	62.50	
Gaps:	0			

## Alignment:

31 ArgSerGlyLeuGlyAlaPro 38  
||||:|||||:|||||  
242 AGGAAGGGGTGGGGGCGACACCC 219

Sequence name: rgep2ndb:CQ772944

Sequence documentation: 1365 bp DNA linear PAT 04-MAR-2004

LOCUS CQ772944  
DEFINITION Sequence 9 from Patent WO2004011641.  
ACCESSION CQ772944  
VERSION CQ772944.1 GI:45126408  
KEYWORDS  
SOURCE synthetic construct  
ORGANISM synthetic construct  
other sequences; artificial sequences.

REFERENCE 1 Villard, J.M., Patel, S.J., Yon, J.R., Cleasby, A., Hamilton, B.J. and  
AUTHORS Shah, A.  
TITL Crystal structure of beta-site app-cleaving enzyme (bace)  
JOURNAL Patent: WO 2004011641-A 9 05-FEB-2004;  
Aetex Technology Limited (GB)

FEATURES  
source  
1. .1365  
/organism="synthetic construct"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:32630"  
/note="DNA sequence coding for the BACE WT R57DEL."

Alignment of: us-10-726-967a-1 x CQ772944 ..

Alignment segment 1/1: (-)

	Quality:	26.00	Score:	302
Matching length:	8		8	
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50	Total Percent Identity:	62.50	
Gaps:	0			

## Alignment:

31 ArgSerGlyLeuGlyAlaPro 38  
||||:|||||:|||||  
329 AGGAAGGGGTGGGGGCGACACCC 306

Sequence name: rgep2ndb:CQ772940

Sequence documentation: 1368 bp DNA linear PAT 04-MAR-2004

LOCUS CQ772940  
DEFINITION Sequence 5 from Patent WO2004011641.  
ACCESSION CQ772940  
VERSION CQ772940.1 GI:45126406  
KEYWORDS  
SOURCE synthetic construct  
ORGANISM synthetic construct  
other sequences; artificial sequences.

REFERENCE 1 Villard, J.M., Patel, S.J., Yon, J.R., Cleasby, A., Hamilton, B.J. and  
AUTHORS Shah, A.  
TITL Crystal structure of beta-site app-cleaving enzyme (bace)  
JOURNAL Patent: WO 2004011641-A 9 05-FEB-2004;  
Aetex Technology Limited (GB)

JOURNAL Patent: WO 2004011641-A 5 05-FEB-2004;  
Astex Technology Limited (GB)  
Location/Qualifiers

1.1368  
/organism="synthetic construct"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:32630"  
/note="DNA sequence coding for the BACE WT R56KR57K."

Alignment of: us-10-726-967a-1 x CQ772940 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgserglyleuglyglyAlaPro  
|||::||| |||::||| |||  
332 AGGAAGGGGTGGGGGACACCC

38  
309

Sequence name: rgep2ndb:CQ772948

Sequence documentation:

LOCUS CQ772948 1368 bp DNA linear PAT 04-MAR-2004  
DEFINITION Sequence 13 from Patent WO2004011641.  
ACCESSION CQ772948  
VERSION CQ772948.1 GI:45126410

KEYWORDS  
SOURCE  
ORGANISM  
synthetic construct  
synthetic construct  
other sequences; artificial sequences.

REFERENCE  
AUTHORS  
1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and

TITLE  
Crystal structure of beta-site app-cleaving enzyme (bace)

JOURNAL  
mutantand uses thereof  
Patent: WO 2004011641-A 13 05-FEB-2004;

FEATURES  
Astex Technology Limited (GB)  
Location/Qualifiers  
1.1368  
/organism="synthetic construct"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:32630"  
/note="DNA sequence coding for the BACE N->Q R56KR57K no

Hls."

Alignment of: us-10-726-967a-1 x CQ772948 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgserglyleuglyglyAlaPro  
|||::||| |||::||| |||  
332 AGGAAGGGGTGGGGGACACCC

38  
309

Sequence name: rgep2ndb:CQ772952

Sequence documentation:

LOCUS CQ772952 1383 bp DNA linear PAT 04-MAR-2004  
DEFINITION Sequence 17 from Patent WO2004011641.  
ACCESSION CQ772952

VERSION CQ772952.1 GI:45126412

KEYWORDS  
SOURCE  
ORGANISM  
synthetic construct  
synthetic construct  
other sequences; artificial sequences.

REFERENCE  
AUTHORS  
1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and

Shah,A.

TITLE  
Crystal structure of beta-site app-cleaving enzyme (bace)

JOURNAL  
mutantand uses thereof  
Patent: WO 2004011641-A 17 05-FEB-2004;

FEATURES  
Astex Technology Limited (GB)  
Location/Qualifiers  
1.1383  
/organism="synthetic construct"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:32630"  
/note="DNA sequence coding for the BACE N->Q R57DEL."

Alignment of: us-10-726-967a-1 x CQ772952 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgserglyleuglyglyAlaPro  
|||::||| |||::||| |||  
329 AGGAAGGGGTGGGGGACACCC

38  
306

Sequence name: rgep2ndb:CQ772946

Sequence documentation:

LOCUS CQ772946 1386 bp DNA linear PAT 04-MAR-2004  
DEFINITION Sequence 11 from Patent WO2004011641.  
ACCESSION CQ772946  
VERSION CQ772946.1 GI:45126409

KEYWORDS  
SOURCE  
ORGANISM  
synthetic construct  
synthetic construct  
other sequences; artificial sequences.

REFERENCE  
AUTHORS  
1 Villard,L.M., Patel,S.J., Yon,J.R., Cleasby,A., Hamilton,B.J. and

Shah,A.

TITLE  
Crystal structure of beta-site app-cleaving enzyme (bace)

JOURNAL  
mutantand uses thereof  
Patent: WO 2004011641-A 11 05-FEB-2004;

FEATURES  
Astex Technology Limited (GB)  
Location/Qualifiers  
1.1386  
/organism="synthetic construct"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:32630"  
/note="DNA sequence coding for the BACE N->Q R56KR57K."

Alignment of: us-10-726-967a-1 x CQ772946 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	302
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgserglyleuglyglyAlaPro  
|||::||| |||::||| |||  
332 AGGAAGGGGTGGGGGACACCC

38  
306

Sequence name: rgep2ndb:CQ772952

Sequence documentation:

LOCUS CQ772952 1383 bp DNA linear PAT 04-MAR-2004  
DEFINITION Sequence 17 from Patent WO2004011641.  
ACCESSION CQ772952

||||:|||||  
332 AGGAGGGGTGGGGGCGACACCC

309

Sequence name: rgep2ndb:AR178470

Sequence documentation:

LOCUS AR178470 2370 bp DNA linear PAT 20-APR-2002  
DEFINITION Sequence 3 from patent US 6319689.  
ACCESSION AR178470  
VERSION AR178470.1 GI:20219608  
KEYWORDS  
SOURCE  
ORGANISM  
REFERENCE 1 (bases 1 to 2370)  
AUTHORS Powell,D.J., Chapman,C.G., Murphy,K. and Smith,T.S.  
TITLE ASP2  
JOURNAL Patent: US 6319689-A 3 20-NOV-2001;  
FEATURES  
source 1..2370  
Location/Qualifiers  
/organism="unknown"  
/mol\_type="unassigned DNA"

Alignment of: us-10-726-967a-1 x AR178470 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	303
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
||||:|||||  
155 AGGAGGGGTGGGGGCGACACCC

38  
132

Sequence name: rgep2ndb:E50817

Sequence documentation:

LOCUS E50817 2370 bp DNA linear PAT 18-JUN-2001  
DEFINITION Aspartate protease ASP2.  
ACCESSION E50817  
VERSION E50817.1 GI:13023200  
KEYWORDS UP 2000060579-A/2.  
SOURCE  
ORGANISM  
REFERENCE 1 (bases 1 to 2370)  
AUTHORS David,J.P., Conrad,G.C., Kay,M. and Trudy,S.S.  
TITLE Aspartate protease ASP2  
JOURNAL Patent: JP 2000060579-A 2 29-FEB-2000;  
FEATURES  
source 1..2370  
Location/Qualifiers  
/organism="unassigned DNA"  
/db\_xref="taxon:32644"

Alignment of: us-10-726-967a-1 x AX002657 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	303
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
||||:|||||  
155 AGGAGGGGTGGGGGCGACACCC

38  
132

FEATURES  
source 1..2370  
Location/Qualifiers  
/organism="unidentified"  
/mol\_type="genomic DNA"  
/db\_xref="taxon:32644"

Alignment of: us-10-726-967a-1 x E50817 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	303
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
||||:|||||  
155 AGGAGGGGTGGGGGCGACACCC

38  
132

Sequence name: rgep2ndb:AX002657

Sequence documentation:

LOCUS AX002657 2370 bp DNA linear PAT 10-MAR-2000  
DEFINITION Sequence 3 from Patent EP0855444.  
ACCESSION AX002657  
VERSION AX002657.1 GI:7242134  
KEYWORDS  
SOURCE  
ORGANISM  
REFERENCE 1 (bases 1 to 2370)  
AUTHORS Murphy,K. and Chapman,C.G.  
TITLE Aspartic protease 2 (ASP2)  
JOURNAL Patent: EP 0855444-A 3 29-JUL-1998;  
FEATURES  
source 1..2370  
Location/Qualifiers  
/organism="unidentified"  
/mol\_type="unassigned DNA"  
/db\_xref="taxon:32644"

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rnpb2ndb:US-10-627-473-9 - 26.00 39.33 373.81 1365 | Sequence 9, Application US  
rnpb2ndb:US-10-627-473-5 - 26.00 39.32 373.83 1368 | Sequence 5, Application US  
rnpb2ndb:US-10-627-473-13 - 26.00 39.32 373.83 1368 | Sequence 13, Application US  
rnpb2ndb:US-10-627-473-17 - 26.00 39.32 373.83 1368 | Sequence 17, Application US  
rnpb2ndb:US-10-627-473-11 - 26.00 39.31 373.95 1386 | Sequence 11, Application US  
rnpb2ndb:US-09-966-671A-3 - 26.00 38.94 378.75 2370 | Sequence 3, Application US  
rnpb2ndb:US-10-308-365-3 - 26.00 38.94 378.75 2370 | Sequence 3, Application US  
rnpb2ndb:US-10-829-717-3 - 26.00 38.94 378.75 2370 | Sequence 3, Application US

Sequence name: rnpb2ndb:US-09-794-927-50

Sequence documentation:

Sequence 50, Application US/09794927  
Patent No. US20010016324A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
TITLE OF INVENTION: THEREFOR

FILE REFERENCE: 28341/6280FG

CURRENT FILING DATE: 2001-02-27  
CURRENT FILING DATE: 2001-02-27

PRIOR FILING DATE: 1999-10-13  
PRIOR FILING DATE: 1999-10-13

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PRIOR FILING DATE: 1999-09-23

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PRIOR FILING DATE: 1999-09-23

PRIOR FILING DATE: 1999-09-23  
PRIOR FILING DATE: 1999-09-23

APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
TITLE OF INVENTION: THEREFOR

FILE REFERENCE: 28341/6280DE

CURRENT FILING DATE: 2001-02-28  
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PRIOR FILING DATE: 1999-10-13  
PRIOR FILING DATE: 1999-10-13

PRIOR FILING DATE: 1999-09-23  
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PRIOR FILING DATE: 1999-09-23

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PRIOR FILING DATE: 1999-09-23

PRIOR FILING DATE: 1999-09-23  
PRIOR FILING DATE: 1999-09-23

Alignment:

22 ThrGlnHtAGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
64 ACCGAGCAGCGCATCCGCTGCTGCGACGCGCTGCGGCGGCGCC 113  
38 OleuGlyLeu 41  
114 CCGGCGGCTG 123

Sequence name: rnpb2ndb:US-09-794-743-50

Sequence documentation:

Sequence 50, Application US/09794743  
Patent No. US20010021391A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
TITLE OF INVENTION: THEREFOR

FILE REFERENCE: 28341/6280BC

CURRENT FILING DATE: 2001-02-27  
CURRENT FILING DATE: 2001-02-27

PRIOR FILING DATE: 1999-10-13  
PRIOR FILING DATE: 1999-10-13

PRIOR FILING DATE: 1999-09-23  
PRIOR FILING DATE: 1999-09-23

PRIOR FILING DATE: 1999-09-23  
PRIOR FILING DATE: 1999-09-23

PRIOR FILING DATE: 1999-09-23  
PRIOR FILING DATE: 1999-09-23

Alignment segment 1/1: (+)

Matching length: 20  
Total length: 47.2  
Matching Percent Similarity: 100.00  
Total Percent Identity: 100.00

Alignment of: us-10-726-967a-1 x US-09-795-847-50

..



64 ACCGAGCAGCATCCGGCTGCCCTGCGAGCGGCGCTGGGGGGCGCCCC 113  
38 oLenglyLeu 41  
114 CTTGGGGCTG 123

Sequence name: rnpbp2ndb:US-09-681-442-50

Sequence documentation:

Sequence 50, Application US/09681442  
Patent No. US2002081634A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280FG  
CURRENT FILING DATE: 1999-09-23  
CURRENT APPLICATION NUMBER: US/09/681,442  
PRIOR FILING DATE: 1999-04-05  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 50  
LENGTH: 1287  
TYPE: DNA  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)  
US-09-681-442-50

Alignment of: us-10-726-967a-1 x US-09-681-442-50 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	47.2
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	
Gaps:	0		100.00	

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
64 ACCGAGCAGCATCCGGCTGCCCTGCGAGCGGCGCTGGGGGGCGCCCC 113  
38 oLenglyLeu 41  
114 CTTGGGGCTG 123

Sequence name: rnpbp2ndb:US-09-869-414-50

Sequence documentation:

Sequence 50, Application US/09869414  
Publication No. US2003007726A1  
GENERAL INFORMATION:  
APPLICANT: Bienkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M

CURRENT APPLICATION NUMBER: US/09/869,414  
CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 50  
LENGTH: 1287  
TYPE: DNA  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)  
US-09-869-414-50

Alignment of: us-10-726-967a-1 x US-09-869-414-50 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	47.2
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	
Gaps:	0		100.00	

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
64 ACCGAGCAGCATCCGGCTGCCCTGCGAGCGGCGCTGGGGGGCGCCCC 113  
38 oLenglyLeu 41  
114 CTTGGGGCTG 123

Sequence name: rnpbp2ndb:US-09-548-366-50

Sequence documentation:

Sequence 50, Application US/09548366  
Publication No. US20030104365A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
FILE REFERENCE: 28341/6280A  
CURRENT APPLICATION NUMBER: US/09/548,366  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 65  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 50  
LENGTH: 1287  
TYPE: DNA  
ORGANISM: Artificial Sequence



;; PRIOR FILING DATE: 2001-02-27  
;; PRIOR APPLICATION NUMBER: 09/416,901  
;; PRIOR FILING DATE: 1999-10-13  
;; PRIOR APPLICATION NUMBER: 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 74  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 50  
;; LENGTH: 1287  
;; TYPE: DNA  
;; ORGANISM: Artificial sequence  
;; FEATURE:  
;; OTHER INFORMATION: Hu-Asp2(b) delta TM  
US-10-652-045-50

Alignment of: us-10-726-967a-1 x US-10-652-045-50 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 47.2
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCCCCCTGCGCAGCGGCTGGGGGCGCCCC 113
38 OleuGlyLeu
114 CCTGGGGGCTG 41
123
```

Sequence name: rnpb2ndb:US-10-476-935-50

Sequence documentation:

;; Sequence 50, Application US/10476935  
;; Publication No. US20040234976A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Beinkowski et al.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
;; FILE REFERENCE: 28341/6280M1  
;; CURRENT APPLICATION NUMBER: US/10/476,935  
;; PRIOR FILING DATE: 2003-11-06  
;; PRIOR APPLICATION NUMBER: 09/416,901  
;; PRIOR FILING DATE: 1999-10-13  
;; PRIOR APPLICATION NUMBER: 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 50  
;; LENGTH: 1287  
;; TYPE: DNA  
;; ORGANISM: Artificial Sequence  
;; FEATURE:  
;; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)  
;; OTHER INFORMATION: delta TM  
US-10-476-935-50

Alignment of: us-10-726-967a-1 x US-10-476-935-50 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 47.2
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCCCCCTGCGCAGCGGCTGGGGGCGCCCC 113
38 OleuGlyLeu
114 CCTGGGGGCTG 41
123
```

Sequence name: rnpb2ndb:US-10-477-076-50

Sequence documentation:

;; Sequence 50, Application US/10477076  
;; Publication No. US20050080232A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Beinkowski et al.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
;; FILE REFERENCE: 28341/6280M2  
;; CURRENT APPLICATION NUMBER: US/10/477,076  
;; PRIOR FILING DATE: 2003-11-06  
;; PRIOR APPLICATION NUMBER: 09/416,901  
;; PRIOR FILING DATE: 1999-10-13  
;; PRIOR APPLICATION NUMBER: 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 50  
;; LENGTH: 1287  
;; TYPE: DNA  
;; ORGANISM: Artificial Sequence  
;; FEATURE:  
;; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)  
;; OTHER INFORMATION: delta TM  
US-10-477-076-50

Alignment of: us-10-726-967a-1 x US-10-477-076-50 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 47.2
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCCCCCTGCGCAGCGGCTGGGGGCGCCCC 113
38 OleuGlyLeu
114 CCTGGGGGCTG 41
123
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Sequence name: rnpb2ndb:US-09-794-927-25

Sequence documentation:

Sequence 25, Application US/09794927  
Patent No. US20010016324A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: US99  
FILE REFERENCE: 28341/628081  
CURRENT APPLICATION NUMBER: US/09/794,927  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patent In Ver. 2.0  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-927-25

Alignment of: us-10-726-967a-1 x US-09-794-927-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnH1sgLY1leAqLgLeuProLeuAqrsGrgLYleuGLyAlAPr 38
4 ACTGAGCATGGTATTGCTCTGCGCACTGCGTACCGGCTCTGGGTGCTCTCC 53
38 OleuGLyLeu
54 ACTGGGTCTG 63
```

Sequence name: rnpb2ndb:US-09-795-847-25

Sequence documentation:

Sequence 25, Application US/09795847  
Patent No. US20010018208A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: US99  
FILE REFERENCE: 28341/628081  
CURRENT APPLICATION NUMBER: US/09/795,847  
CURRENT FILING DATE: 2001-02-28

PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patent In Ver. 2.0  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-795-847-25

Alignment of: us-10-726-967a-1 x US-09-795-847-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnH1sgLY1leAqLgLeuProLeuAqrsGrgLYleuGLyAlAPr 38
4 ACTGAGCATGGTATTGCTCTGCGCACTGCGTACCGGCTCTGGGTGCTCTCC 53
38 OleuGLyLeu
54 ACTGGGTCTG 63
```

Sequence name: rnpb2ndb:US-09-794-743-25

Sequence documentation:

Sequence 25, Application US/09794743  
Patent No. US20010021391A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: US99  
FILE REFERENCE: 28341/628081  
CURRENT APPLICATION NUMBER: US/09/794,743  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patent In Ver. 2.0  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-743-25

Alignment of: us-10-726-967a-1 x US-09-794-743-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLPr 38
|||||
4 ACTGACGATGTAATTCGTCTGCCACTGCGTAGCGGTCTGGGTGCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGCTCTG 63
```

Sequence name: rnpbp2ndb:US-09-794-748-25

Sequence documentation:

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; Sequence 25, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridgung
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/62801L
; CURRENT APPLICATION NUMBER: US/09/794,748
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-748-25
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Alignment of: us-10-726-967a-1 x US-09-794-748-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLPr 38
|||||
4 ACTGACGATGTAATTCGTCTGCCACTGCGTAGCGGTCTGGGTGCTCC 53
|||||
38 OleuGlyLeu 41
|||||
```

54 ACTGGGCTCTG

63

Sequence name: rnpbp2ndb:US-09-794-925-25

Sequence documentation:

```
; Sequence 25, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridgung
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/62801L
; CURRENT APPLICATION NUMBER: US/09/794,925
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-925-25
```

Alignment of: us-10-726-967a-1 x US-09-794-925-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLPr 38
|||||
4 ACTGACGATGTAATTCGTCTGCCACTGCGTAGCGGTCTGGGTGCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGCTCTG 63
```

Sequence name: rnpbp2ndb:US-09-681-442-25

Sequence documentation:

```
; Sequence 25, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridgung
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/681,442
; CURRENT FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
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; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 25  
; LENGTH: 1302  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-681-442-25

Alignment of: us-10-726-967a-1 x US-09-681-442-25 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 47.3
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

22	ThrglnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr	38
4	ACTCAGCATGTAATTCGTCTGCCACTGCGGTCTGGGTGCTCTCC	53
38	oleuGlyLeu	41
54	ACTGGGTCTG	63

Sequence name: rnpb2ndb:US-09-869-414-25

Sequence documentation:

; Sequence 25, Application US/09869414  
; Publication No. US2003007226A1  
; GENERAL INFORMATION:  
; APPLICANT: Bielnkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M  
; CURRENT APPLICATION NUMBER: US/09/869,414  
; PRIOR FILING DATE: 2001-06-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 25  
; LENGTH: 1302  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-869-414-25

Alignment of: us-10-726-967a-1 x US-09-869-414-25 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 47.3
Matching length:	20	Total length: 20

Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22	ThrglnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr	38
4	ACTCAGCATGTAATTCGTCTGCCACTGCGGTCTGGGTGCTCTCC	53
38	oleuGlyLeu	41
54	ACTGGGTCTG	63

Sequence name: rnpb2ndb:US-09-548-366-25

Sequence documentation:

; Sequence 25, Application US/09548366  
; Publication No. US20030104365A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bielnkowski, Michael J.  
; APPLICANT: Heintz, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
; FILE REFERENCE: 28341/6280A  
; CURRENT APPLICATION NUMBER: US/09/548,366  
; PRIOR FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 25  
; LENGTH: 1302  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-548-366-25

Alignment of: us-10-726-967a-1 x US-09-548-366-25 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 47.3
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

22	ThrglnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr	38
4	ACTCAGCATGTAATTCGTCTGCCACTGCGGTCTGGGTGCTCTCC	53
38	oleuGlyLeu	41
54	ACTGGGTCTG	63

Sequence name: rnpb2ndb:US-10-652-927-25

Sequence documentation:

; Sequence 25, Application US/10652927  
; Publication No. US20040043408A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.

```
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ TITLE OF INVENTION: Therefor
/ FILE REFERENCE: 29915/6280N3
/ CURRENT APPLICATION NUMBER: US/10/652,927
/ PRIOR FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 25
/ LENGTH: 1302
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-10-652-927-25
```

Alignment of: us-10-726-967a-1 x US-10-652-927-25 ..

Alignment segment 1/1: (+)

Matching length:	Quality:	Total length:	Score:
20	104.00	20	47.3
100.00	100.00	100.00	20
100.00	100.00	100.00	100.00
Total Percent Similarity: 100.00			
Total Percent Identity: 100.00			
Gaps: 0			

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGATTCGTCTGCCACTGCGTACGGTCTGGGTGCTCC 53
|||||
38 oLeuGlyLeu 41
|||||
54 ACTGGGCTCTG 63
```

Sequence name: rnpb2ndb:US-10-652-830-25

Sequence documentation:

```
/ Sequence 25, Application US/10652830
/ Publication No. US20040048303A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N1
/ CURRENT APPLICATION NUMBER: US/10/652,830
/ CURRENT FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/416,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 25
/ LENGTH: 1302
```

```
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-10-652-830-25
```

Alignment of: us-10-726-967a-1 x US-10-652-830-25 ..

Alignment segment 1/1: (+)

Matching length:	Quality:	Total length:	Score:
20	104.00	20	47.3
100.00	100.00	100.00	20
100.00	100.00	100.00	100.00
Total Percent Similarity: 100.00			
Total Percent Identity: 100.00			
Gaps: 0			

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGATTCGTCTGCCACTGCGTACGGTCTGGGTGCTCC 53
|||||
38 oLeuGlyLeu 41
|||||
54 ACTGGGCTCTG 63
```

Sequence name: rnpb2ndb:US-10-652-045-25

Sequence documentation:

```
/ Sequence 25, Application US/10652045
/ Publication No. US2004016507A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N2
/ CURRENT APPLICATION NUMBER: US/10/652,045
/ CURRENT FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 25
/ LENGTH: 1302
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-10-652-045-25
```

Alignment of: us-10-726-967a-1 x US-10-652-045-25 ..

Alignment segment 1/1: (+)

Matching length:	Quality:	Total length:	Score:
20	104.00	20	47.3
100.00	100.00	100.00	20
100.00	100.00	100.00	100.00
Total Percent Similarity: 100.00			
Total Percent Identity: 100.00			
Gaps: 0			

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGATTCGTCTGCCACTGCGTACGGTCTGGGTGCTCC 53
|||||
38 oLeuGlyLeu 41
```

|||||  
54 ACTGGGCTCTG

63

Sequence name: rnpbp2ndb:US-10-476-935-25

Sequence documentation:  
; Sequence 25, Application US/10476935  
; Publication No. US20040234976A1  
; GENERAL INFORMATION:  
; APPLICANT: Belinkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M1  
; CURRENT APPLICATION NUMBER: US/10/476,935  
; PRIORITY FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 25  
; LENGTH: 1302  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-476-935-25

Alignment of: us-10-726-967a-1 x US-10-476-935-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrglnhsglylleargleuproleuargserglyleuglyalaPr 38  
|||||  
4 ACTGAGCATGGATTGCTGCTGCACCTGCGTAGCGGCTGGGTGGTCTCC 53  
|||||  
38 cleuGlyleu 41  
|||||  
54 ACTGGGCTCTG 63

Sequence name: rnpbp2ndb:US-10-940-867-25

Sequence documentation:  
; Sequence 25, Application US/10940867  
; Publication No. US20050026256A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrikson, Robert L.  
; APPLICANT: Perodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; APPLICANT: Pharmacia & Upjohn Company  
; TITLE OF INVENTION: Alzheimer's Disease Secretase  
; FILE REFERENCE: 6177.PCPA  
; CURRENT APPLICATION NUMBER: US/10/940,867  
; PRIORITY FILING DATE: 2004-09-14  
; PRIOR APPLICATION NUMBER: US 09/806,194  
; PRIOR FILING DATE: 2001-03-26  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 49  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 25  
; LENGTH: 1302  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-940-867-25

Alignment of: us-10-726-967a-1 x US-10-940-867-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrglnhsglylleargleuproleuargserglyleuglyalaPr 38  
|||||  
4 ACTGAGCATGGATTGCTGCTGCACCTGCGTAGCGGCTGGGTGGTCTCC 53  
|||||  
38 cleuGlyleu 41  
|||||  
54 ACTGGGCTCTG 63

Sequence name: rnpbp2ndb:US-10-477-076-25

Sequence documentation:  
; Sequence 25, Application US/10477076  
; Publication No. US20050080232A1  
; GENERAL INFORMATION:  
; APPLICANT: Belinkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M2  
; CURRENT APPLICATION NUMBER: US/10/477,076  
; PRIORITY FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 25  
; LENGTH: 1302  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-477-076-25

Alignment of: us-10-726-967a-1 x US-10-477-076-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrglnhsglylleargleuproleuargserglyleuglyalaPr 38  
|||||  
4 ACTGAGCATGGATTGCTGCTGCACCTGCGTAGCGGCTGGGTGGTCTCC 53  
|||||



PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 52  
LENGTH: 1305  
TYPE: DNA  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)  
US-09-794-743-52

Alignment of: us-10-726-967a-1 x US-09-794-743-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1sgYl1eArGleuProleuAArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCTCCCTGCGACGCGCTGGGGGGGCCCC 113
38 OleuGlyLeu
114 CTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-794-748-52

Sequence documentation:

Sequence 52, Application US/09794748  
Patent No. US20020037315A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Van, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: US95  
FILE REFERENCE: 28341/62801J  
CURRENT APPLICATION NUMBER: US/09/794,748  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 52  
LENGTH: 1305  
TYPE: DNA  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)  
US-09-794-748-52

Alignment of: us-10-726-967a-1 x US-09-794-748-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1sgYl1eArGleuProleuAArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCTCCCTGCGACGCGCTGGGGGGGCCCC 113
38 OleuGlyLeu
114 CTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-794-925-52

Sequence documentation:

Sequence 52, Application US/09794925  
Patent No. US20020064819A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Van, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/62801J  
CURRENT APPLICATION NUMBER: US/09/794,925  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 52  
LENGTH: 1305  
TYPE: DNA  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)  
US-09-794-925-52

Alignment of: us-10-726-967a-1 x US-09-794-925-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1sgYl1eArGleuProleuAArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCTCCCTGCGACGCGCTGGGGGGGCCCC 113
38 OleuGlyLeu
114 CTGGGGGCTG 123
```

Alignment of: us-10-726-967a-1 x US-09-794-925-52 ..

114 CCGGGGCTG

123

Sequence name: rnpbp2ndb:US-09-681-442-52

Sequence documentation:

Sequence 52, Application US/09681442  
Patent No. US20020081634A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280FG  
CURRENT APPLICATION NUMBER: US/09/681,442  
CURRENT FILING DATE: 2001-04-05  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 08/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 52  
LENGTH: 1305  
TYPE: DNA  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)  
US-09-681-442-52

Alignment of: us-10-726-967a-1 x US-09-681-442-52 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGGCTGGGGGGGCCCC 113
|||
38 OleuGlyLeu 41
|||
114 CCGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-09-869-414-52

Sequence documentation:

Sequence 52, Application US/09869414  
Publication No. US20030077226A1  
GENERAL INFORMATION:  
APPLICANT: Bienkowski, et al  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M  
CURRENT APPLICATION NUMBER: US/09/869,414  
CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 52  
LENGTH: 1305  
TYPE: DNA  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)  
US-09-869-414-52

Alignment of: us-10-726-967a-1 x US-09-869-414-52 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGGCTGGGGGGGCCCC 113
|||
38 OleuGlyLeu 41
|||
114 CCGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-09-548-366-52

Sequence documentation:

Sequence 52, Application US/09548366  
Publication No. US20030104365A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
FILE REFERENCE: 28341/6280A  
CURRENT APPLICATION NUMBER: US/09/548,366  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 65  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 52  
LENGTH: 1305  
TYPE: DNA  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aap2(b)  
US-09-548-366-52

Alignment of: us-10-726-967a-1 x US-09-548-366-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTCCGACGCGGCTGGGGGGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-652-927-52

Sequence documentation:

```
; Sequence 52, Application US/10652927
; Publication No. US20040043408A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N3
; CURRENT APPLICATION NUMBER: US/10/652,927
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 52
; LENGTH: 1305
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2(b) delta TM
US-10-652-927-52
```

Alignment of: us-10-726-967a-1 x US-10-652-927-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTCCGACGCGGCTGGGGGGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
```

114 CCTGGGGCTG

123

Sequence name: rnpb2ndb:US-10-652-830-52

Sequence documentation:

```
; Sequence 52, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 52
; LENGTH: 1305
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2(b) delta TM
US-10-652-830-52
```

Alignment of: us-10-726-967a-1 x US-10-652-830-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTCCGACGCGGCTGGGGGGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-652-045-52

Sequence documentation:

```
; Sequence 52, Application US/10652045
; Publication No. US20040166507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
```

```

; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 52
; LENGTH: 1305
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-10-652-045-52
```

Alignment of: us-10-726-967a-1 x US-10-652-045-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHieGlyIleArgLeuProLeuAArgSerGlyLeuGlyAlaLPr 38
|||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
|||
38 oleuGlyLeu 41
|||
114 CTTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-476-935-52

Sequence documentation:

```

; Sequence 52, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 52
; LENGTH: 1305
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
US-10-476-935-52
```

Alignment of: us-10-726-967a-1 x US-10-476-935-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHieGlyIleArgLeuProLeuAArgSerGlyLeuGlyAlaLPr 38
|||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
|||
38 oleuGlyLeu 41
|||
114 CTTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-477-076-52

Sequence documentation:

```

; Sequence 52, Application US/10477076
; Publication No. US20050080232A1
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M2
; CURRENT APPLICATION NUMBER: US/10/477,076
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 52
; LENGTH: 1305
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
US-10-477-076-52
```

Alignment of: us-10-726-967a-1 x US-10-477-076-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHieGlyIleArgLeuProLeuAArgSerGlyLeuGlyAlaLPr 38
|||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
|||
38 oleuGlyLeu 41
|||
114 CTTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-794-927-21

Sequence documentation:



```
; Sequence 21, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: US99
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-927-21
```

Alignment of: us-10-726-967a-1 x US-09-794-927-21 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
43 ACCGACGACGCGATCCGGCTGCCCTGCGCAGCGGCGGCGGCCCC 92
|||
38 OleuGlyLeu 41
|||
93 CCTGGGCGCTG 102
```

Sequence name: rnpb2ndb:US-09-795-847-21

Sequence documentation:

```
; Sequence 21, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: US99
; FILE REFERENCE: 28341/6280DB
; CURRENT APPLICATION NUMBER: US/09/795,847
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
```

```
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-795-847-21
```

Alignment of: us-10-726-967a-1 x US-09-795-847-21 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
43 ACCGACGACGCGATCCGGCTGCCCTGCGCAGCGGCGGCGGCCCC 92
|||
38 OleuGlyLeu 41
|||
93 CCTGGGCGCTG 102
```

Sequence name: rnpb2ndb:US-09-794-743-21

Sequence documentation:

```
; Sequence 21, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: US99
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-743-21
```

Alignment of: us-10-726-967a-1 x US-09-794-743-21 ..

Alignment segment 1/1: (+)

Quality: 104.00      EScore: 47.4  
Matching length: 20  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
43 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 92  
38 OleuGlyLeu 41  
|||||  
93 CCGGGGGCTG 102

Sequence name: rnpbp2ndb.US-09-794-748-21

## Sequence documentation:

/ Sequence 21, Application US/09794748  
/ Patent No. US20020037315A1  
/ GENERAL INFORMATION:  
/ APPLICANT: Gurney, Mark E.  
/ APPLICANT: Bienkowski, Michael J.  
/ APPLICANT: Heinrichson, Robert L.  
/ APPLICANT: Parodi, Luis A.  
/ APPLICANT: Yan, Riqiang  
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
/ TITLE OF INVENTION: USES  
/ FILE REFERENCE: 28341/62801J  
/ CURRENT APPLICATION NUMBER: US/09/794,748  
/ PRIOR FILING DATE: 2001-02-27  
/ PRIOR APPLICATION NUMBER: 09/416,901  
/ PRIOR FILING DATE: 1999-10-13  
/ PRIOR APPLICATION NUMBER: 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 09/404,133  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: PCT/US99/20881  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 60/101,594  
/ PRIOR FILING DATE: 1998-09-24  
/ NUMBER OF SEQ ID NOS: 73  
/ SOFTWARE: PatentIn Ver. 2.0  
/ SEQ ID NO 21  
/ LENGTH: 1341  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens  
/ US-09-794-748-21

Alignment of: us-10-726-967a-1 x US-09-794-748-21 ..

## Alignment segment 1/1: (+)

Quality: 104.00      EScore: 47.4  
Matching length: 20  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
43 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 92  
38 OleuGlyLeu 41  
|||||  
93 CCGGGGGCTG 102

Sequence name: rnpbp2ndb.US-09-794-925-21

Sequence documentation:  
/ Sequence 21, Application US/09794925  
/ Patent No. US20020064819A1  
/ GENERAL INFORMATION:  
/ APPLICANT: Gurney, Mark E.  
/ APPLICANT: Bienkowski, Michael J.  
/ APPLICANT: Heinrichson, Robert L.  
/ APPLICANT: Parodi, Luis A.  
/ APPLICANT: Yan, Riqiang  
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
/ TITLE OF INVENTION: THEREFOR  
/ FILE REFERENCE: 28341/62801J  
/ CURRENT APPLICATION NUMBER: US/09/794,925  
/ PRIOR FILING DATE: 2001-02-27  
/ PRIOR APPLICATION NUMBER: 09/416,901  
/ PRIOR FILING DATE: 1999-10-13  
/ PRIOR APPLICATION NUMBER: 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 09/404,133  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: PCT/US99/20881  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 60/101,594  
/ PRIOR FILING DATE: 1998-09-24  
/ NUMBER OF SEQ ID NOS: 73  
/ SOFTWARE: PatentIn Ver. 2.0  
/ SEQ ID NO 21  
/ LENGTH: 1341  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens  
/ US-09-794-925-21

Alignment of: us-10-726-967a-1 x US-09-794-925-21 ..

## Alignment segment 1/1: (+)

Quality: 104.00      EScore: 47.4  
Matching length: 20  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
43 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 92  
38 OleuGlyLeu 41  
|||||  
93 CCGGGGGCTG 102

Sequence name: rnpbp2ndb.US-09-681-442-21

## Sequence documentation:

/ Sequence 21, Application US/09681442  
/ Patent No. US20020081634A1  
/ GENERAL INFORMATION:  
/ APPLICANT: Gurney, Mark E.  
/ APPLICANT: Bienkowski, Michael J.  
/ APPLICANT: Heinrichson, Robert L.  
/ APPLICANT: Parodi, Luis A.  
/ APPLICANT: Yan, Riqiang  
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
/ TITLE OF INVENTION: THEREFOR  
/ FILE REFERENCE: 28341/62801J  
/ CURRENT APPLICATION NUMBER: US/09/681,442  
/ PRIOR FILING DATE: 2001-04-05  
/ PRIOR APPLICATION NUMBER: 09/416,901  
/ PRIOR FILING DATE: 1999-10-13  
/ PRIOR APPLICATION NUMBER: 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 09/404,133

;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 21  
;; LENGTH: 1341  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-09-681-442-21

Alignment of: us-10-726-967a-1 x US-09-681-442-21 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.4
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
43 ACCGACGACGGCATTCCGGCTGCCCTGGCAGCGGCTGGGGGGGCCCC 92  
38 oLeuGlyLeu 41  
93 CCTGGGGGCTG 102

Sequence name: rnpb2ndb:US-09-869-414-21

Sequence documentation:

;; Sequence 21, Application US/09869414  
;; Publication No. US20030077226A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Bienkowski et al.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
;; FILE REFERENCE: 28341/6280M  
;; CURRENT APPLICATION NUMBER: US/09/869,414  
;; CURRENT FILING DATE: 2001-06-27  
;; PRIOR APPLICATION NUMBER: 09/416,901  
;; PRIOR FILING DATE: 1999-10-13  
;; PRIOR APPLICATION NUMBER: 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 21  
;; LENGTH: 1341  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-09-869-414-21

Alignment of: us-10-726-967a-1 x US-09-869-414-21 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.4
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
43 ACCGACGACGGCATTCCGGCTGCCCTGGCAGCGGCTGGGGGGGCCCC 92  
38 oLeuGlyLeu 41  
93 CCTGGGGGCTG 102

Sequence name: rnpb2ndb:US-09-548-366-21

Sequence documentation:

;; Sequence 21, Application US/09548366  
;; Publication No. US20030104365A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Gurney, Mark E.  
;; APPLICANT: Bienkowski, Michael J.  
;; APPLICANT: Heinrichson, Robert L.  
;; APPLICANT: Parodi, Luis A.  
;; APPLICANT: Yan, Riqiang  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
;; FILE REFERENCE: 28341/6280A  
;; CURRENT APPLICATION NUMBER: US/09/548,366  
;; CURRENT FILING DATE: 2000-04-12  
;; PRIOR APPLICATION NUMBER: 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 65  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 21  
;; LENGTH: 1341  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-09-548-366-21

Alignment of: us-10-726-967a-1 x US-09-548-366-21 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.4
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
43 ACCGACGACGGCATTCCGGCTGCCCTGGCAGCGGCTGGGGGGGCCCC 92  
38 oLeuGlyLeu 41  
93 CCTGGGGGCTG 102

Sequence name: rnpb2ndb:US-10-652-927-21

Sequence documentation:

;; Sequence 21, Application US/10652927  
;; Publication No. US2004003408A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Gurney et al.  
;; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
;; FILE REFERENCE: 29915/6280N3  
;; CURRENT APPLICATION NUMBER: US/10/652,927

CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 21  
LENGTH: 1341  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-652-927-21

Alignment of: us-10-726-967a-1 x US-10-652-927-21 ..

Alignment segment 1/1: (+)  
Matching length: 104.00  
Total length: 20  
Matching Percent Similarity: 100.00  
Total Percent Identity: 100.00  
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
43 ACCGACGACGCGATCCGCTGCCCTGCCGACGCGGCTGGGGGGGCCCC 92
|||
38 oLeuGlyLeu 41
|||
93 CCTGGGGGCTG 102
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Sequence name: rnpbp2ndb:US-10-652-830-21

Sequence documentation:

Sequence 21, Application US/10652830  
Publication No. US20040048303A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N1  
CURRENT APPLICATION NUMBER: US/10/652,830  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 21  
LENGTH: 1341  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-652-830-21

Alignment of: us-10-726-967a-1 x US-10-652-830-21 ..

Alignment segment 1/1: (+)  
Matching length: 104.00  
Total length: 20  
Matching Percent Similarity: 100.00  
Total Percent Identity: 100.00  
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
43 ACCGACGACGCGATCCGCTGCCCTGCCGACGCGGCTGGGGGGGCCCC 92
|||
38 oLeuGlyLeu 41
|||
93 CCTGGGGGCTG 102
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Sequence name: rnpbp2ndb:US-10-652-045-21

Sequence documentation:

Sequence 21, Application US/10652045  
Publication No. US20040166507A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N2  
CURRENT APPLICATION NUMBER: US/10/652,045  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 21  
LENGTH: 1341  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-652-045-21

Alignment of: us-10-726-967a-1 x US-10-652-045-21 ..

Alignment segment 1/1: (+)

Matching length: 104.00  
Total length: 20  
Matching Percent Similarity: 100.00  
Total Percent Identity: 100.00  
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
43 ACCGACGACGCGATCCGCTGCCCTGCCGACGCGGCTGGGGGGGCCCC 92
|||
38 oLeuGlyLeu 41
|||
93 CCTGGGGGCTG 102
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Sequence name: rnpbp2ndb:US-10-476-935-21

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Sequence documentation:
; Sequence 21, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Belinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-476-935-21

Alignment of: us-10-726-967a-1 x US-10-476-935-21 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Score: 47.4
      Matching length: 20      Total length: 20
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

Alignment:
22 ThrGlnH1sgLy1leAArgLeuProLeuAArgSerGlyLeuGlyAlaApr 38
43 ACCGAGCAGCGCATCCGGCTGCGCTGCGCAGCGGCTTGGGGGGCGCCCC 92
38 oleuGlyLeu
93 CCTGGGGGCTG 102

Sequence name: rnpb2ndb:US-10-940-867-21

Sequence documentation:
; Sequence 21, Application US/10940867
; Publication No. US2005026256A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heintikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177, PCPA
; CURRENT APPLICATION NUMBER: US/10/940,867
; CURRENT FILING DATE: 2004-09-14
; PRIOR APPLICATION NUMBER: US 09/806,194
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
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TYPE: DNA
ORGANISM: Homo sapiens
US-10-940-867-21

Alignment of: us-10-726-967a-1 x US-10-940-867-21 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Score: 47.4
      Matching length: 20      Total length: 20
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

Alignment:
22 ThrGlnH1sgLy1leAArgLeuProLeuAArgSerGlyLeuGlyAlaApr 38
43 ACCGAGCAGCGCATCCGGCTGCGCTGCGCAGCGGCTTGGGGGGCGCCCC 92
38 oleuGlyLeu
93 CCTGGGGGCTG 102

Sequence name: rnpb2ndb:US-10-477-076-21

Sequence documentation:
; Sequence 21, Application US/10477076
; Publication No. US20050080232A1
; GENERAL INFORMATION:
; APPLICANT: Belinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M2
; CURRENT APPLICATION NUMBER: US/10/477,076
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-477-076-21

Alignment of: us-10-726-967a-1 x US-10-477-076-21 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Score: 47.4
      Matching length: 20      Total length: 20
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

Alignment:
22 ThrGlnH1sgLy1leAArgLeuProLeuAArgSerGlyLeuGlyAlaApr 38
43 ACCGAGCAGCGCATCCGGCTGCGCTGCGCAGCGGCTTGGGGGGCGCCCC 92
38 oleuGlyLeu
93 CCTGGGGGCTG 102
```





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; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-681-442-29
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Alignment of: us-10-726-967a-1 x US-09-681-442-29 ..

Alignment segment 1/1: (+)

Matching	Percent Similarity:	100.00	20	Matching	Percent Identity:	100.00	20
Total	Percent Similarity:	100.00	0	Total	Percent Identity:	100.00	20

Alignment:

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22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCGACACGGGATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
38 OLeuGlyLeu
114 CTTGGGGGCTG
41
123
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Sequence name: rmpbp2ndb:US-09-869-414-29

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Sequence documentation:
; Sequence 29, Application US/09869414
; Publication No. US2003007226A1
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-869-414-29
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Alignment of: us-10-726-967a-1 x US-09-869-414-29 ..

Alignment segment 1/1: (+)

Matching	Quality:	104.00
Matching length:	20	

Score:	47.4
Total length:	20

Matching	Percent Similarity:	100.00	100.00	Matching	Percent Identity:	100.00	100.00
Total	Percent Similarity:	100.00	0	Total	Percent Identity:	100.00	20

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCGACACGGGATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
38 OLeuGlyLeu
114 CTTGGGGGCTG
41
123
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Sequence name: rmpbp2ndb:US-09-548-366-29

Sequence documentation:

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; Sequence 29, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridgand
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-366-29
```

Alignment of: us-10-726-967a-1 x US-09-548-366-29 ..

Alignment segment 1/1: (+)

Matching	Quality:	104.00	20	Matching	Percent Identity:	100.00	20
Total	Percent Similarity:	100.00	0	Total	Percent Identity:	100.00	20

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCGACACGGGATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
38 OLeuGlyLeu
114 CTTGGGGGCTG
41
123
```

Sequence name: rmpbp2ndb:US-10-652-927-29

Sequence documentation:

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; Sequence 29, Application US/10652927
; Publication No. US20040043408A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
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; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N3
; CURRENT APPLICATION NUMBER: US/10/652,927
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-927-29

Alignment of: us-10-726-967a-1 x US-10-652-927-29 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Score: 47.4
      Matching length: 20      Total length: 20
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCCCTGGCGACGGCGCTGGGGGGCCCC 113
38 oleuGlyLeu 41
114 CCTGGGGCTG 123

Sequence name: rnpb2ndb:US-10-652-830-29

Sequence documentation:
; Sequence 29, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-830-29
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; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-830-29

Alignment of: us-10-726-967a-1 x US-10-652-830-29 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Score: 47.4
      Matching length: 20      Total length: 20
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCCCTGGCGACGGCGCTGGGGGGCCCC 113
38 oleuGlyLeu 41
114 CCTGGGGCTG 123

Sequence name: rnpb2ndb:US-10-652-045-29

Sequence documentation:
; Sequence 29, Application US/10652045
; Publication No. US20040166507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-045-29

Alignment of: us-10-726-967a-1 x US-10-652-045-29 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Score: 47.4
      Matching length: 20      Total length: 20
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCCCTGGCGACGGCGCTGGGGGGCCCC 113
38 oleuGlyLeu 41
```

|||||  
114 CCTGGGCGCTG

123

Sequence name: rnpbp2ndb:US-10-476-935-29

Sequence documentation:  
; Sequence 29, Application US/10476935  
; Publication No. US20040234976A1  
; GENERAL INFORMATION:  
; APPLICANT: Beinkowski et al.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M1  
; CURRENT APPLICATION NUMBER: US/10/476,935  
; CURRENT FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 29  
; LENGTH: 1362  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-476-935-29

Alignment of: us-10-726-967a-1 x US-10-476-935-29 ..

Alignment segment 1/1: (+)

Matching	Quality:	104.00	Score:	47.4
Length:	20		20	
Percent Similarity:	100.00		100.00	
Total				
Percent Similarity:	100.00		100.00	
Gaps:	0			
Total				
Percent Identity:	100.00		100.00	

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCAGCAGCGCATCCGGCTGCCCTCGCGCAGCGGCGCTGGGGGCGCCCC 113  
|||||  
38 OlenGlyLeu 41  
|||||  
114 CCTGGGCGCTG 123

Sequence name: rnpbp2ndb:US-10-940-867-29

Sequence documentation:  
; Sequence 29, Application US/10940867  
; Publication No. US2005026256A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrikeon, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; APPLICANT: Pharmacia & Upjohn Company  
; TITLE OF INVENTION: Alzheimer's Disease Secretase  
; FILE REFERENCE: 6177.PCDA  
; CURRENT APPLICATION NUMBER: US/10/940,867  
; CURRENT FILING DATE: 2004-09-14  
; PRIOR APPLICATION NUMBER: US 09/806,194  
; PRIOR FILING DATE: 2001-03-26  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 49  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 29  
; LENGTH: 1362  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-940-867-29

Alignment of: us-10-726-967a-1 x US-10-940-867-29 ..

Alignment segment 1/1: (+)

Matching	Quality:	104.00	Score:	47.4
Length:	20		20	
Percent Similarity:	100.00		100.00	
Total				
Percent Similarity:	100.00		100.00	
Gaps:	0			
Total				
Percent Identity:	100.00		100.00	

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCAGCAGCGCATCCGGCTGCCCTCGCGCAGCGGCGCTGGGGGCGCCCC 113  
|||||  
38 OlenGlyLeu 41  
|||||  
114 CCTGGGCGCTG 123

Sequence name: rnpbp2ndb:US-10-477-076-29

Sequence documentation:  
; Sequence 29, Application US/10477076  
; Publication No. US2005080232A1  
; GENERAL INFORMATION:  
; APPLICANT: Beinkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M2  
; CURRENT APPLICATION NUMBER: US/10/477,076  
; CURRENT FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 29  
; LENGTH: 1362  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-477-076-29

Alignment of: us-10-726-967a-1 x US-10-477-076-29 ..

Alignment segment 1/1: (+)

Matching	Quality:	104.00	Score:	47.4
Length:	20		20	
Percent Similarity:	100.00		100.00	
Total				
Percent Similarity:	100.00		100.00	
Gaps:	0			
Total				
Percent Identity:	100.00		100.00	

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCAGCAGCGCATCCGGCTGCCCTCGCGCAGCGGCGCTGGGGGCGCCCC 113

38 0leuglyleu  
|||||  
114 CCGGGGCTG

41

123

Sequence name: rnpb2ndb:US-10-372-473-8

Sequence documentation:

; Sequence 8, Application US/10372473  
; Publication No. US20040005691A1  
; GENERAL INFORMATION:  
; APPLICANT: Chou, Kuo-Chen  
; APPLICANT: Howe, W. Jeffery  
; TITLE OF INVENTION: Modified BACE  
; FILE REFERENCE: MBHB 01-1766-A  
; CURRENT APPLICATION NUMBER: US/10/372,473  
; CURRENT FILING DATE: 2003-02-21  
; NUMBER OF SEQ ID NOS: 24  
; SOFTWARE: PatentIn version 3.2  
; SEQ ID NO 8  
; LENGTH: 1365  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
; FEATURE:  
; NAME/KEY: misc feature  
; OTHER INFORMATION: DNA sequence of recombinant human BACE with P33K mutation from E.  
US-10-372-473-8

Alignment of: us-10-726-967a-1 x US-10-372-473-8 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 Thrglnh1sgly1leargleuproleuargserglyleuglyala1apr 38  
|||||  
70 ACCCAACATGATTCGTCTGCGACCTGCGCTACGCGCTGCGGCTGCTCC 119  
|||||  
38 0leuglyleu 41  
|||||  
120 ACTGGGCTCTG 129

Sequence name: rnpb2ndb:US-10-627-473-9

Sequence documentation:

; Sequence 9, Application US/10627473  
; Publication No. US20040096950A1  
; GENERAL INFORMATION:  
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE  
; APPLICANT: PATEL, SAHIL JOE  
; APPLICANT: YON, JEFFREY ROLAND  
; APPLICANT: CLEASBY, ANNE  
; APPLICANT: HAMILTON, BRUCE JOHN  
; APPLICANT: SHAH, ALBEM  
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME  
; FILE REFERENCE: 674553-2002.1  
; CURRENT APPLICATION NUMBER: US/10/627,473  
; CURRENT FILING DATE: 2003-07-25  
; PRIOR APPLICATION NUMBER: 60/398,681  
; PRIOR FILING DATE: 2002-07-26  
; NUMBER OF SEQ ID NOS: 46  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 9  
; LENGTH: 1365  
; TYPE: DNA

; ORGANISM: Homo sapiens  
US-10-627-473-9

Alignment of: us-10-726-967a-1 x US-10-627-473-9 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 Thrglnh1sgly1leargleuproleuargserglyleuglyala1apr 38  
|||||  
70 ACCCAACATGATTCGTCTGCGACCTGCGCTACGCGCTGCGGCTGCTCC 119  
|||||  
38 0leuglyleu 41  
|||||  
120 CCGGGGCTG 129

Sequence name: rnpb2ndb:US-10-627-473-1

Sequence documentation:

; Sequence 1, Application US/10627473  
; Publication No. US20040096950A1  
; GENERAL INFORMATION:  
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE  
; APPLICANT: PATEL, SAHIL JOE  
; APPLICANT: YON, JEFFREY ROLAND  
; APPLICANT: CLEASBY, ANNE  
; APPLICANT: HAMILTON, BRUCE JOHN  
; APPLICANT: SHAH, ALBEM  
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME  
; FILE REFERENCE: 674553-2002.1  
; CURRENT APPLICATION NUMBER: US/10/627,473  
; CURRENT FILING DATE: 2003-07-25  
; PRIOR APPLICATION NUMBER: 60/398,681  
; PRIOR FILING DATE: 2002-07-26  
; NUMBER OF SEQ ID NOS: 46  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 1  
; LENGTH: 1368  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-627-473-1

Alignment of: us-10-726-967a-1 x US-10-627-473-1 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 Thrglnh1sgly1leargleuproleuargserglyleuglyala1apr 38  
|||||  
70 ACCCAACATGATTCGTCTGCGACCTGCGCTACGCGCTGCGGCTGCTCC 119  
|||||  
38 0leuglyleu 41  
|||||  
120 CCGGGGCTG 129

Sequence name: rnpb2ndb:US-10-627-473-5

Sequence documentation:

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; Sequence 5, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 5
; LENGTH: 1368
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-627-473-5
```

Alignment of: us-10-726-967a-1 x US-10-627-473-5 ..

```
Alignment segment 1/1: (+)
      Quality: 104.00      Total length: 47.5
Matching length: 20      Matching Percent Identity: 100.00
Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0
```

Alignment:

```
22 ThrglnHISGLYlleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
70 ACCGAGCAGCGCATCCGCTGCGCCCTGCGCAGCGGCTGGGGGCGCCCC 119
|||||
38 oleuGlyLeu 41
|||||
120 CTTGGGGCTG 129
```

Sequence name: rnpbp2ndb:US-10-627-473-7

Sequence documentation:

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; Sequence 7, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 7
; LENGTH: 1368
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-627-473-7
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Alignment of: us-10-726-967a-1 x US-10-627-473-7 ..

```
Alignment segment 1/1: (+)
      Quality: 104.00      Total length: 47.5
Matching length: 20      Matching Percent Identity: 100.00
Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0
```

Alignment:

```
22 ThrglnHISGLYlleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
70 ACCGAGCAGCGCATCCGCTGCGCCCTGCGCAGCGGCTGGGGGCGCCCC 119
|||||
38 oleuGlyLeu 41
|||||
120 CTTGGGGCTG 129
```

Sequence name: rnpbp2ndb:US-10-627-473-13

Sequence documentation:

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; Sequence 13, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILLARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 13
; LENGTH: 1368
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-627-473-13
```

Alignment of: us-10-726-967a-1 x US-10-627-473-13 ..

Alignment segment 1/1: (+)

```
      Quality: 104.00      Total length: 47.5
Matching length: 20      Matching Percent Identity: 100.00
Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0
```

Alignment:

```
22 ThrglnHISGLYlleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
70 ACCGAGCAGCGCATCCGCTGCGCCCTGCGCAGCGGCTGGGGGCGCCCC 119
|||||
38 oleuGlyLeu 41
|||||
120 CTTGGGGCTG 129
```

Sequence name: rnpbp2ndb:US-10-281-092-7

Sequence documentation:

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; Sequence 7, Application US/10281092
; Publication No. US20040121947A1
; GENERAL INFORMATION:
; APPLICANT: Ghosh, Arun K.
; APPLICANT: Tang, Jordan J.N.
```

```

; APPLICANT: Bilcer, Geoffrey
; APPLICANT: Chang, Manpin
; APPLICANT: Hong, Lin
; APPLICANT: Koelsch, Gerald E.
; APPLICANT: Loy, Jeffrey A.
; APPLICANT: Turner, Robert T., III
; APPLICANT: Devasumadrum, Thippeswamy
; TITLE OF INVENTION: COMPOUNDS WHICH INHIBIT BETA-SECRETASE
; TITLE OF INVENTION: ACTIVITY AND METHODS OF USE THEREOF
; FILE REFERENCE: 2932.1001-004
; CURRENT APPLICATION NUMBER: US/10/281.092
; CURRENT FILING DATE: 2002-10-23
; PRIOR APPLICATION NUMBER: US 10/032,818
; PRIOR FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: PCT US01/50826
; PRIOR FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: US 60/258,705
; PRIOR FILING DATE: 2000-12-28
; PRIOR APPLICATION NUMBER: US 60/275,756
; PRIOR FILING DATE: 2001-03-14
; PRIOR APPLICATION NUMBER: US 60/335,952
; PRIOR FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: US 60/333,545
; PRIOR FILING DATE: 2001-11-27
; PRIOR APPLICATION NUMBER: US 60/348,464
; PRIOR FILING DATE: 2002-01-14
; PRIOR APPLICATION NUMBER: US 60/348,615
; PRIOR FILING DATE: 2002-01-14
; PRIOR APPLICATION NUMBER: US 60/390,804
; PRIOR FILING DATE: 2002-06-20
; PRIOR APPLICATION NUMBER: US 60/397,557
; PRIOR FILING DATE: 2002-07-19
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 59
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 7
; LENGTH: 1371
; TYPE: DNA
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: promemapsin 2-T1
; US-10-281-092-7

Alignment of: us-10-726-967a-1 x US-10-281-092-7  ..

Alignment segment 1/1: (+)

      Quality: 104.00      Escore: 47.5
      Matching length: 20      Total length: 20
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

Alignment:
22 ThrGlnHisGlyLeaArgLeuProLeuArgSerGlyLeuGlyValaPr 38
70 ACCCAGCAGGCAATCCGGCTGCCCTGCGCAGCGGCTG3GGGGCGCCCC 119
38 oleuGlyLeu 41
120 CCTGGGGCTCG 129

Sequence name: rnpb2ndb:US-09-794-927-23

Sequence documentation:
; Sequence 23, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
```

```

; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES THEREFOR
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-794-927-23

Alignment of: us-10-726-967a-1 x US-09-794-927-23  ..

Alignment segment 1/1: (+)

      Quality: 104.00      Escore: 47.5
      Matching length: 20      Total length: 20
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

Alignment:
22 ThrGlnHisGlyLeaArgLeuProLeuArgSerGlyLeuGlyValaPr 38
82 ACCCAGCAGGCAATCCGGCTGCCCTGCGCAGCGGCTG3GGGGCGCCCC 131
38 oleuGlyLeu 41
132 CCTGGGGCTCG 141

Sequence name: rnpb2ndb:US-09-794-927-31

Sequence documentation:
; Sequence 31, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES THEREFOR
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
```

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; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-927-31
```

Alignment of: us-10-726-967a-1 x US-09-794-927-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 Thrglnh1sg1ylea1rgleupProleuA1rgserg1yleuG1yq1yAla1Apr 38
|||||
64 ACCGACGACGGCATCCGGCTGCGCTGCGGAGCGGCTGGGGGGGCGCCCC 113
|||||
38 oleuG1yleu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-09-795-847-23

Sequence documentation:

```

; Sequence 23, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-795-847-23
```

Alignment of: us-10-726-967a-1 x US-09-795-847-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 Thrglnh1sg1ylea1rgleupProleuA1rgserg1yleuG1yq1yAla1Apr 38
|||||
82 ACCGACGACGGCATCCGGCTGCGCTGCGGAGCGGCTGGGGGGGCGCCCC 131
|||||
38 oleuG1yleu 41
|||||
132 CCTGGGGGCTG 141
```

Sequence name: rnpbp2ndb:US-09-795-847-31

Sequence documentation:

```

; Sequence 31, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-795-847-31
```

Alignment of: us-10-726-967a-1 x US-09-795-847-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 Thrglnh1sg1ylea1rgleupProleuA1rgserg1yleuG1yq1yAla1Apr 38
|||||
64 ACCGACGACGGCATCCGGCTGCGCTGCGGAGCGGCTGGGGGGGCGCCCC 113
|||||
38 oleuG1yleu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-09-794-743-23

Sequence documentation:

```

; Sequence 23, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
```

```
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: US/09/794,743
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-743-23

Alignment of: us-10-726-967a-1 x US-09-794-743-23 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Escore: 47.5
      Matching length: 20      Total length: 20
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

Alignment:
22 ThrGlnHisGlyTLeArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
82 ACCGACGACGCGATCCGCGCTGCCCTGCGACGCGCGCTGGGGGCGCC 131
|||||
38 oleuGlyLeu 41
|||||
132 CCTGGGGCTG 141

Sequence name: rnpb2ndb:US-09-794-743-31

Sequence documentation:
; Sequence 31, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
```

```
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-743-31

Alignment of: us-10-726-967a-1 x US-09-794-743-31 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Escore: 47.5
      Matching length: 20      Total length: 20
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

Alignment:
22 ThrGlnHisGlyTLeArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGCGATCCGCGCTGCCCTGCGACGCGCGCTGGGGGCGCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGGCTG 123

Sequence name: rnpb2ndb:US-09-794-748-23

Sequence documentation:
; Sequence 23, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Ridqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280JL
; CURRENT APPLICATION NUMBER: US/09/794,748
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-748-23

Alignment of: us-10-726-967a-1 x US-09-794-748-23 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Escore: 47.5
      Matching length: 20      Total length: 20
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0
```

## Alignment:

```
22 ThrGlnH1sgly1leArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
82 ACCAGACGCGCATCCGGCTGCCCTGGCGACGGCGCTGGGGGGCGCCCC 131
|||||
38 OleuGlyLeu 41
|||||
132 CCTGGGGGCTG 141
```

Sequence name: rnpb2ndb:US-09-794-748-31

## Sequence documentation:

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; Sequence 31, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280JL
; CURRENT FILING DATE: 2001-02-27
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1998-09-24
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-748-31
```

Alignment of: us-10-726-967a-1 x US-09-794-748-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

## Alignment:

```
22 ThrGlnH1sgly1leArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCAGACGCGCATCCGGCTGCCCTGGCGACGGCGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-794-925-23

## Sequence documentation:

```
; Sequence 23, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
```

```
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
```

```
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-925-23
```

Alignment of: us-10-726-967a-1 x US-09-794-925-23 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

## Alignment:

```
22 ThrGlnH1sgly1leArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
82 ACCAGACGCGCATCCGGCTGCCCTGGCGACGGCGCTGGGGGGCGCCCC 131
|||||
38 OleuGlyLeu 41
|||||
132 CCTGGGGGCTG 141
```

Sequence name: rnpb2ndb:US-09-794-925-31

## Sequence documentation:

```
; Sequence 31, Application US/09794925
; Patent No. US20020064819A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1998-09-24
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 73
```



SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 31  
; LENGTH: 1380  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-794-925-31

Alignment of: us-10-726-967a-1 x US-09-794-925-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGCGATCGGCTGCCCTGCGACGCGGCTGGGGGGGCCCC 113
38 oleuGlyLeu
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-681-442-23

Sequence documentation:

; Sequence 23, Application US/09681442  
; Patent No. US20020081634A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280FG  
; CURRENT FILING DATE: 2001-04-05  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 23  
; LENGTH: 1380  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-681-442-23

Alignment of: us-10-726-967a-1 x US-09-681-442-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
82 ACCGACGACGCGATCGGCTGCCCTGCGACGCGGCTGGGGGGGCCCC 131
38 oleuGlyLeu
|||||
132 CCTGGGGGCTG 141
```

Sequence name: rnpb2ndb:US-09-681-442-31

Sequence documentation:

; Sequence 31, Application US/09681442  
; Patent No. US20020081634A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280FG  
; CURRENT FILING DATE: 2001-04-05  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 31  
; LENGTH: 1380  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-681-442-31

Alignment of: us-10-726-967a-1 x US-09-681-442-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGCGATCGGCTGCCCTGCGACGCGGCTGGGGGGGCCCC 113
38 oleuGlyLeu
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-869-414-23

Sequence documentation:

; Sequence 23, Application US/09869414  
; Publication No. US20030077226A1  
; GENERAL INFORMATION:  
; APPLICANT: Beinowski et al.  
; APPLICANT: Heinrichson, Robert L.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M  
; CURRENT APPLICATION NUMBER: US/09/869,414

CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 23  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-869-414-23

Alignment of: us-10-726-967a-1 x US-09-869-414-23 ..

Alignment segment 1/1: (+)

Matching Length:	104.00	Score:	47.5
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyTleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38
|||||
82 ACCGAGCAGCGCATCCGCGCTGCCCTGCGCAGCGGCGGCGGCGCCCC 131
|||||
38 OleuGlyLeu
|||||
132 CTTGGGGGCTG 141
```

Sequence name: rnpbp2ndb:US-09-869-414-31

Sequence documentation:  
Publication NO. US20030077226A1  
GENERAL INFORMATION:  
APPLICANT: Beinikowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M  
CURRENT APPLICATION NUMBER: US/09/869,414  
CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 31  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-869-414-31

Alignment of: us-10-726-967a-1 x US-09-869-414-31 ..

Alignment segment 1/1: (+)

Matching Length:	104.00	Score:	47.5
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyTleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38
|||||
64 ACCGAGCAGCGCATCCGCGCTGCCCTGCGCAGCGGCGGCGGCGCCCC 113
|||||
38 OleuGlyLeu
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-09-548-366-23

Sequence documentation:

Publication NO. US20030104365A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark B.  
APPLICANT: Bienikowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
FILE REFERENCE: 28341/6280A  
CURRENT APPLICATION NUMBER: US/09/548,366  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 65  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 23  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-366-23

Alignment of: us-10-726-967a-1 x US-09-548-366-23 ..

Alignment segment 1/1: (+)

Matching Length:	104.00	Score:	47.5
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyTleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38
|||||
82 ACCGAGCAGCGCATCCGCGCTGCCCTGCGCAGCGGCGGCGGCGCCCC 131
|||||
38 OleuGlyLeu
|||||
132 CTTGGGGGCTG 141
```

Sequence name: rnpbp2ndb:US-09-548-366-31

Sequence documentation:

Publication NO. US20030104365A1

GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riglang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
FILE REFERENCE: 28341/6280A  
CURRENT APPLICATION NUMBER: US/09/548,366  
PRIOR FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 65  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 31  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-366-31

Alignment of: us-10-726-967a-1 x US-09-548-366-31 ..

Alignment segment 1/1: (+)

Matching length:	Quality:	Total length:	Score:
20	104.00	20	47.5
Matching Percent Similarity: 100.00		Matching Percent Identity: 100.00	
Total Percent Similarity: 100.00		Total Percent Identity: 100.00	
Gaps: 0			

Alignment:

22	ThrgInH1sgly1leArgLeuProLeuArgSerglyLeuGlyVAlaPr	38
64	ACCCAGCAGCGCATCGGCTGCCCTGCGCAGCGGCGGCGGCCCC	113
38	oleuGlyLeu	41
114	CCTGGGCGCTG	123

Sequence name: rnpb2ndb:US-10-652-927-23

Sequence documentation:

Sequence 23, Application US/10652927  
Publication No. US20040043408A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 28915/6280N3  
CURRENT APPLICATION NUMBER: US/10/652,927  
PRIOR FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 23  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-652-927-23

Alignment of: us-10-726-967a-1 x US-10-652-927-23 ..

Alignment segment 1/1: (+)

Matching length:	Quality:	Total length:	Score:
20	104.00	20	47.5
Matching Percent Similarity: 100.00		Matching Percent Identity: 100.00	
Total Percent Similarity: 100.00		Total Percent Identity: 100.00	
Gaps: 0			

Alignment:

22	ThrgInH1sgly1leArgLeuProLeuArgSerglyLeuGlyVAlaPr	38
82	ACCCAGCAGCGCATCGGCTGCCCTGCGCAGCGGCGGCGGCCCC	131
38	oleuGlyLeu	41
132	CCTGGGCGCTG	141

Sequence name: rnpb2ndb:US-10-652-927-31

Sequence documentation:

Sequence 31, Application US/10652927  
Publication No. US20040043408A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 28915/6280N3  
CURRENT APPLICATION NUMBER: US/10/652,927  
PRIOR FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 31  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-652-927-31

Alignment of: us-10-726-967a-1 x US-10-652-927-31 ..

Alignment segment 1/1: (+)

Matching length:	Quality:	Total length:	Score:
20	104.00	20	47.5
Matching Percent Similarity: 100.00		Matching Percent Identity: 100.00	
Total Percent Similarity: 100.00		Total Percent Identity: 100.00	
Gaps: 0			

Alignment:

22	ThrgInH1sgly1leArgLeuProLeuArgSerglyLeuGlyVAlaPr	38
64	ACCCAGCAGCGCATCGGCTGCCCTGCGCAGCGGCGGCGGCCCC	113

38 OLeuGlyLeu  
114 CCGGGGGCTG

41  
123

Sequence name: rnpbp2ndb:US-10-652-830-23

Sequence documentation:

Sequence 23, Application US/10652830  
Publication No. US20040048303A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N1  
CURRENT APPLICATION NUMBER: US/10/652,830  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 23  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-652-830-23

Alignment of: us-10-726-967a-1 x US-10-652-830-23 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.5
Matching	Percent Similarity:	100.00	Matching	Percent Identity:	100.00
Total	Percent Similarity:	100.00	Total	Percent Identity:	100.00
Gaps:		0			

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
82 ACCGACGACGCGATCCGCTGCCCTGCGCAGCGGCGGGGGCGCC 131  
38 OLeuGlyLeu  
132 CCGGGGGCTG  
41  
141

Sequence name: rnpbp2ndb:US-10-652-830-31

Sequence documentation:

Sequence 31, Application US/10652830  
Publication No. US20040048303A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N1  
CURRENT APPLICATION NUMBER: US/10/652,830  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 31  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-652-830-31

Alignment of: us-10-726-967a-1 x US-10-652-830-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	47.5
Matching	Percent Similarity:	100.00	Matching	Percent Identity:	100.00
Total	Percent Similarity:	100.00	Total	Percent Identity:	100.00
Gaps:		0			

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
64 ACCGACGACGCGATCCGCTGCCCTGCGCAGCGGCGGGGGCGCC 113  
38 OLeuGlyLeu  
114 CCGGGGGCTG  
41  
123

Sequence name: rnpbp2ndb:US-10-652-045-23

Sequence documentation:

Sequence 23, Application US/10652045  
Publication No. US2004016507A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N2  
CURRENT APPLICATION NUMBER: US/10/652,045  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 23  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-652-045-23

Alignment of: us-10-726-967a-1 x US-10-652-045-23 ..

Alignment segment 1/1: (+)

Quality: 104.00  
Score: 47.5

Matching Length: 20 Total Length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHISGLYILEARGLNUPROLEUARGSERGLYLEUGLYVALAPR 38  
82 ACCGACGACGGCATCCGGCTGCCCTGCCACGCGGCTGGGGGGGCCCC 131  
38 OLeuGLYLeu 41  
132 CCTGGGGCTG 141

Sequence name: rnpb2ndb:US-10-652-045-31

## Sequence documentation:

; Sequence 31, Application US/10652045  
; Publication No. US20040165507A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280N2  
; CURRENT APPLICATION NUMBER: US/10/652,045  
; PRIOR FILING DATE: 2003-08-29  
; PRIOR APPLICATION NUMBER: 09/794,925  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 31  
; LENGTH: 1380  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-652-045-31

Alignment of: us-10-726-967a-1 x US-10-652-045-31 ..

## Alignment segment 1/1: (+)

Quality: 104.00 EScore: 47.5  
Matching Length: 20 Total Length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHISGLYILEARGLNUPROLEUARGSERGLYLEUGLYVALAPR 38  
64 ACCGACGACGGCATCCGGCTGCCCTGCCACGCGGCTGGGGGGGCCCC 113  
38 OLeuGLYLeu 41  
114 CCTGGGGCTG 123

Sequence name: rnpb2ndb:US-10-476-935-23

## Sequence documentation:

; Sequence 23, Application US/10476935  
; Publication No. US20040234976A1  
; GENERAL INFORMATION:

APPLICANT: Beinkowski et al.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

FILE REFERENCE: 28341/6280M1

CURRENT APPLICATION NUMBER: US/10/476,935

PRIOR FILING DATE: 2003-11-06

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 23

LENGTH: 1380

TYPE: DNA

ORGANISM: Homo sapiens

US-10-476-935-23

Alignment of: us-10-726-967a-1 x US-10-476-935-23 ..

## Alignment segment 1/1: (+)

Quality: 104.00 EScore: 47.5  
Matching Length: 20 Total Length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHISGLYILEARGLNUPROLEUARGSERGLYLEUGLYVALAPR 38  
82 ACCGACGACGGCATCCGGCTGCCCTGCCACGCGGCTGGGGGGGCCCC 131  
38 OLeuGLYLeu 41  
132 CCTGGGGCTG 141

Sequence name: rnpb2ndb:US-10-476-935-31

## Sequence documentation:

; Sequence 31, Application US/10476935  
; Publication No. US20040234976A1  
; GENERAL INFORMATION:  
; APPLICANT: Beinkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M1  
; CURRENT APPLICATION NUMBER: US/10/476,935  
; PRIOR FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 31  
; LENGTH: 1380  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-476-935-31

Alignment of: us-10-726-967a-1 x US-10-476-935-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACACGCGCATCCGGCTGCCCTCGCGACGCGCTGGGGGGCCCCC 113
|||||
38 oLeuGlyLeu
|||||
114 CCGGGGGCTG
|||||
123
```

Sequence name: rnpbp2ndb:US-10-940-867-23

Sequence documentation:

```
; Sequence 23, Application US/10940867
; Publication No. US20050026256A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.PCPA
; CURRENT APPLICATION NUMBER: US/10/940,867
; CURRENT FILING DATE: 2004-09-14
; PRIOR APPLICATION NUMBER: US 09/806,194
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-940-867-23
```

Alignment of: us-10-726-967a-1 x US-10-940-867-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
82 ACCGACACGCGCATCCGGCTGCCCTCGCGACGCGCTGGGGGGCCCCC 131
|||||
38 oLeuGlyLeu
|||||
132 CCGGGGGCTG
|||||
141
```

Sequence name: rnpbp2ndb:US-10-940-867-31

Sequence documentation:

```
; Sequence 31, Application US/10940867
```

```
; Publication No. US20050026256A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.PCPA
; CURRENT APPLICATION NUMBER: US/10/940,867
; CURRENT FILING DATE: 2004-09-14
; PRIOR APPLICATION NUMBER: US 09/806,194
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-940-867-31
```

Alignment of: us-10-726-967a-1 x US-10-940-867-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACACGCGCATCCGGCTGCCCTCGCGACGCGCTGGGGGGCCCCC 113
|||||
38 oLeuGlyLeu
|||||
114 CCGGGGGCTG
|||||
123
```

Sequence name: rnpbp2ndb:US-10-477-076-23

Sequence documentation:

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; Sequence 23, Application US/10477076
; Publication No. US20050080232A1
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M2
; CURRENT APPLICATION NUMBER: US/10/477,076
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-477-076-23
```

Alignment of: us-10-726-967a-1 x US-10-477-076-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
82 ACCGACGACGCGATCCGCGCTGCCCTCGCGACGCGCGCTGGGGGGCCCC 131
38 oleuglyLeu
|||||
132 CCTGGGGCGCTG 141
```

Sequence name: rnpb2ndb:US-10-477-076-31

Sequence documentation:

; Sequence 31, Application US/10477076

; Publication No. US2005080232A1

; GENERAL INFORMATION:

; APPLICANT: Beinkowski et al.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

; FILE REFERENCE: 28341/6280M2

; CURRENT APPLICATION NUMBER: US/10/477,076

; PRIOR FILING DATE: 2003-11-06

; PRIOR APPLICATION NUMBER: 09/416,901

; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20861

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 31

; LENGTH: 1380

; TYPE: DNA

; ORGANISM: Homo sapiens

US-10-477-076-31

Alignment of: us-10-726-967a-1 x US-10-477-076-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGCGATCCGCGCTGCCCTCGCGACGCGCGCTGGGGGGCCCC 113
38 oleuglyLeu
|||||
114 CCTGGGGCGCTG 123
```

Sequence name: rnpb2ndb:US-10-627-473-17

Sequence documentation:

; Sequence 17, Application US/10627473

; Publication No. US20040096950A1

; GENERAL INFORMATION:

; APPLICANT: VUILARD, LAURENT MICHEL MARIE

; APPLICANT: PATEL, SAHIL JOE

; APPLICANT: YON, JEFFREY ROLAND

; APPLICANT: CLEASHY, ANNE

; APPLICANT: HAMILTON, BRUCE JOHN

; APPLICANT: SHAH, ALBEM

; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME

; FILE REFERENCE: 674553-2002.1

; CURRENT APPLICATION NUMBER: US/10/627,473

; PRIOR FILING DATE: 2003-07-25

; PRIOR APPLICATION NUMBER: 60/398,681

; PRIOR FILING DATE: 2002-07-26

; NUMBER OF SEQ ID NOS: 46

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 17

; LENGTH: 1383

; TYPE: DNA

; ORGANISM: Homo sapiens

US-10-627-473-17

Alignment of: us-10-726-967a-1 x US-10-627-473-17 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
70 ACCGACGACGCGATCCGCGCTGCCCTCGCGACGCGCGCTGGGGGGCCCC 119
38 oleuglyLeu
|||||
120 CCTGGGGCGCTG 129
```

Sequence name: rnpb2ndb:US-10-627-473-3

Sequence documentation:

; Sequence 3, Application US/10627473

; Publication No. US20040096950A1

; GENERAL INFORMATION:

; APPLICANT: VUILARD, LAURENT MICHEL MARIE

; APPLICANT: PATEL, SAHIL JOE

; APPLICANT: YON, JEFFREY ROLAND

; APPLICANT: CLEASHY, ANNE

; APPLICANT: HAMILTON, BRUCE JOHN

; APPLICANT: SHAH, ALBEM

; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME

; FILE REFERENCE: 674553-2002.1

; CURRENT APPLICATION NUMBER: US/10/627,473

; PRIOR FILING DATE: 2003-07-25

; PRIOR APPLICATION NUMBER: 60/398,681

; PRIOR FILING DATE: 2002-07-26

; NUMBER OF SEQ ID NOS: 46

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 3

; LENGTH: 1386

; TYPE: DNA

; ORGANISM: Homo sapiens

US-10-627-473-3

Alignment of: us-10-726-967a-1 x US-10-627-473-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrglnHhsg1y1leaArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
70 ACCCAGCAGCGCATCCGGCTGCGCTGCGCAGCGGCTGGGGGGCCCC 119
38 OLeuGlyLeu
|||||
120 CCTGGGGGCTG 41
129
```

Sequence name: rnpbp2ndb:US-10-627-473-11

Sequence documentation:

```
; Sequence 11, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILARD, LAURENT MICHEL MARIE
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASHBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
; APPLICANT: SHAH, ALEEM
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 11
; LENGTH: 1386
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-627-473-11
```

Alignment of: us-10-726-967a-1 x US-10-627-473-11 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrglnHhsg1y1leaArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
70 ACCCAGCAGCGCATCCGGCTGCGCTGCGCAGCGGCTGGGGGGCCCC 119
38 OLeuGlyLeu
|||||
120 CCTGGGGGCTG 41
129
```

Sequence name: rnpbp2ndb:US-10-627-473-15

Sequence documentation:

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; Sequence 15, Application US/10627473
; Publication No. US20040096950A1
; GENERAL INFORMATION:
; APPLICANT: VUILARD, LAURENT MICHEL MARIE
```

```
; APPLICANT: PATEL, SAHIL JOE
; APPLICANT: YON, JEFFREY ROLAND
; APPLICANT: CLEASHBY, ANNE
; APPLICANT: HAMILTON, BRUCE JOHN
```

```
; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME
; FILE REFERENCE: 674553-2002.1
; CURRENT APPLICATION NUMBER: US/10/627,473
; CURRENT FILING DATE: 2003-07-25
; PRIOR APPLICATION NUMBER: 60/398,681
; PRIOR FILING DATE: 2002-07-26
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 15
; LENGTH: 1386
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-627-473-15
```

Alignment of: us-10-726-967a-1 x US-10-627-473-15 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrglnHhsg1y1leaArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
70 ACCCAGCAGCGCATCCGGCTGCGCTGCGCAGCGGCTGGGGGGCCCC 119
38 OLeuGlyLeu
|||||
120 CCTGGGGGCTG 41
129
```

Sequence name: rnpbp2ndb:US-10-214-932-103

Sequence documentation:

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; Sequence 103, Application US/10214932
; Publication No. US20030100707A1
; GENERAL INFORMATION:
; APPLICANT: HWANG, Inhwan
; APPLICANT: KIM, Dae Heon
; APPLICANT: LEE, Yong Jik
; TITLE OF INVENTION: SYSTEM FOR DETECTING PROTEASE
; FILE REFERENCE: APB02/US
; CURRENT APPLICATION NUMBER: US/10/214,932
; CURRENT FILING DATE: 2002-08-08
; NUMBER OF SEQ ID NOS: 133
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 103
; LENGTH: 1506
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: gene
; LOCATION: (1)..(1506)
; OTHER INFORMATION: Gene for APP beta-secretase
; NAME/KEY: CDS
; LOCATION: (1)..(1503)
; OTHER INFORMATION: APP beta-secretase
; PUBLICATION INFORMATION:
; DATABASE ACCESSION NUMBER: GenBank/AF201468
; DATABASE ENTRY DATE: 1999-12-19
US-10-214-932-103
```

Alignment of: us-10-726-967a-1 x US-10-214-932-103 ..



## Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

## Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
64 ACCCAGCAGCGCATCCGCTGCCCTGCCAGCGGCTGGGGGGCCCC 113
|||
38 OleuGlyLeu 41
|||
114 CCTGGGGCTG 123
```

## Sequence name: rnpb2ndb:US-10-372-730-8

## Sequence documentation:

```
; Sequence 8, Application US/10372730
; Publication No. US20030167486A1
; GENERAL INFORMATION:
; APPLICANT: Jacobson, Helmut
; APPLICANT: Kosbach-Ozmen, Laurence
; APPLICANT: Nellboeck-Hochstetler, Peter
; TITLE OF INVENTION: Double transgenic animal model for Alzheimer's Disease
; FILE REFERENCE: Case 21132
; CURRENT APPLICATION NUMBER: US/10/372,730
; PRIOR APPLICATION NUMBER: EP02004331.1
; PRIOR FILING DATE: 2002-03-01
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 1506
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-10-372-730-8
```

## Alignment of: us-10-726-967a-1 x US-10-372-730-8 ..

## Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

## Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
64 ACCCAGCAGCGCATCCGCTGCCCTGCCAGCGGCTGGGGGGCCCC 113
|||
38 OleuGlyLeu 41
|||
114 TCTGGGACTG 123
```

## Sequence name: rnpb2ndb:US-10-281-092-5

## Sequence documentation:

```
; Sequence 5, Application US/10281092
; Publication No. US20040121947A1
; GENERAL INFORMATION:
; APPLICANT: Ghosh, Arun K.
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Bilcer, Geoffrey
; APPLICANT: Chang, Wanhua
; APPLICANT: Hong, Lin
```

## APPLICANT: Koelsch, Gerald E.

```
; APPLICANT: Loy, Jeffrey A., III
; APPLICANT: Turner, Robert T., III
; APPLICANT: Devasumadram, Thiageswamy
; TITLE OF INVENTION: COMPOUNDS WHICH INHIBIT BETA-SECRETASE
; FILE REFERENCE: 2932.1001-004
; CURRENT APPLICATION NUMBER: US/10/281,092
; CURRENT FILING DATE: 2002-10-23
; PRIOR APPLICATION NUMBER: US 10/032,818
; PRIOR FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: PCT US01/50826
; PRIOR FILING DATE: 2001-12-28
; PRIOR APPLICATION NUMBER: US 60/258,705
; PRIOR FILING DATE: 2000-12-28
; PRIOR APPLICATION NUMBER: US 60/275,756
; PRIOR FILING DATE: 2001-03-14
; PRIOR APPLICATION NUMBER: US 60/335,952
; PRIOR FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: US 60/333,545
; PRIOR FILING DATE: 2001-11-27
; PRIOR APPLICATION NUMBER: US 60/348,464
; PRIOR FILING DATE: 2002-01-14
; PRIOR APPLICATION NUMBER: US 60/348,615
; PRIOR FILING DATE: 2002-01-14
; PRIOR APPLICATION NUMBER: US 60/390,804
; PRIOR FILING DATE: 2002-06-20
; PRIOR APPLICATION NUMBER: US 60/397,557
; PRIOR FILING DATE: 2002-07-19
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 59
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 5
; LENGTH: 1506
; TYPE: DNA
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: memapsin 2
; US-10-281-092-5
```

## Alignment of: us-10-726-967a-1 x US-10-281-092-5 ..

## Alignment segment 1/1: (+)

Quality:	104.00	Score:	47.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

## Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
64 ACCCAGCAGCGCATCCGCTGCCCTGCCAGCGGCTGGGGGGCCCC 113
|||
38 OleuGlyLeu 41
|||
114 CCTGGGGCTG 123
```

## Sequence name: rnpb2ndb:US-10-275-339A-6

## Sequence documentation:

```
; Sequence 6, Application US/10275339A
; Publication No. US20040110743A1
; GENERAL INFORMATION:
; APPLICANT: MIYAMOTO, Masasumi
; APPLICANT: MATSUI, Junji
; APPLICANT: FUKUMOTO, Hiroaki
; APPLICANT: TAKUI, Naoki
; TITLE OF INVENTION: Beta Secretase Inhibitors
; FILE REFERENCE: 2729 USOP
; CURRENT APPLICATION NUMBER: US/10/275,339A
```

CURRENT FILING DATE: 2003-10-30  
PRIOR APPLICATION NUMBER: PCT/JP01/04144  
PRIOR FILING DATE: 2001-05-18  
PRIOR APPLICATION NUMBER: JP 2000-152758  
NUMBER OF SEQ ID NOS: 9  
SOFTWARE: PatentIn version 3.2  
SEQ ID NO 6  
LENGTH: 1527  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-275-339A-6

Alignment of: us-10-726-967a-1 x US-10-275-339A-6 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 Thrglnhieglylleargleuproleuargserglyleuglygylalapr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGGCTGGGGGGGCCCCC 113
|||||
38 oleuglyleu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-10-322-684-1

Sequence documentation:

Sequence 1, Application US/10322684  
Publication No. US20030125257A1  
GENERAL INFORMATION:  
APPLICANT: Hoffmann-La Roche Inc.  
TITLE OF INVENTION: Assay and screening method for identification of inhibitors of de  
TITLE OF INVENTION: secretases  
FILE REFERENCE: Case 21066  
CURRENT APPLICATION NUMBER: US/10/322,684  
CURRENT FILING DATE: 2002-12-18  
PRIOR APPLICATION NUMBER: EP0130282.5  
PRIOR FILING DATE: 2001-12-20  
NUMBER OF SEQ ID NOS: 2  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 1  
LENGTH: 1542  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-322-684-1

Alignment of: us-10-726-967a-1 x US-10-322-684-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	47.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 Thrglnhieglylleargleuproleuargserglyleuglygylalapr 38
|||||
79 ACCGAGCAGCGCATCCGCTGCCCTGCCAGCGGCTGGAGGTGCACC 128
|||||
38 oleuglyleu 41
|||||
```

129 TCTGGCACTG

138

Sequence name: rnpbp2ndb:US-09-794-927-5

Sequence documentation:

Sequence 5, Application US/09794927  
Patent No. US20010016324A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Van, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: SEES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/6280FG  
CURRENT APPLICATION NUMBER: US/09/794,927  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-927-5

Alignment of: us-10-726-967a-1 x US-09-794-927-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 Thrglnhieglylleargleuproleuargserglyleuglygylalapr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGGCTGGGGGGGCCCCC 113
|||||
38 oleuglyleu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-09-795-847-5

Sequence documentation:

Sequence 5, Application US/09795847  
Patent No. US20010018208A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: SEES  
FILE REFERENCE: 28341/6280DE  
CURRENT APPLICATION NUMBER: US/09/795,847

CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-795-847-5

Alignment of: us-10-726-967a-1 x US-09-795-847-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGGCGGCGGCCCC 113
|||||
38 OleuGLYleu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-794-743-5

Sequence documentation:

Sequence 5, Application US/09794743  
Patent No. US20010021391A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: US8  
FILE REFERENCE: 28341/6280BC  
CURRENT APPLICATION NUMBER: US/09/794,743  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-743-5

Alignment of: us-10-726-967a-1 x US-09-794-743-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGGCGGCGGCCCC 113
|||||
38 OleuGLYleu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-794-748-5

Sequence documentation:

Sequence 5, Application US/09794748  
Patent No. US20020037315A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: US8  
FILE REFERENCE: 28341/6280JL  
CURRENT APPLICATION NUMBER: US/09/794,748  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-748-5

Alignment of: us-10-726-967a-1 x US-09-794-748-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGGCGGCGGCCCC 113
|||||
38 OleuGLYleu 41
```

114 CCGGGGCTG

123

Sequence name: rnpbp2ndb:US-09-794-925-5

Sequence documentation:

/ Sequence 5, Application US/09794925  
/ Patent No. US20020064819A1  
/ GENERAL INFORMATION:  
/ APPLICANT: Gurney, Mark E.  
/ APPLICANT: Bienkowski, Michael J.  
/ APPLICANT: Heinriksen, Robert L.  
/ APPLICANT: Parodi, Luis A.  
/ APPLICANT: Yan, Riqiang  
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
/ FILE REFERENCE: 28341/6280H1  
/ CURRENT APPLICATION NUMBER: US/09/794,925  
/ PRIOR FILING DATE: 2001-02-27  
/ PRIOR APPLICATION NUMBER: 09/416,901  
/ PRIOR FILING DATE: 1999-10-13  
/ PRIOR APPLICATION NUMBER: 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 09/404,133  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: PCT/US99/20881  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 60/101,594  
/ PRIOR FILING DATE: 1998-09-24  
/ NUMBER OF SEQ ID NOS: 73  
/ SOFTWARE: PatentIn Ver. 2.0  
/ SEQ ID NO 5  
/ LENGTH: 1977  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens  
US-09-794-925-5

Alignment of: us-10-726-967a-1 x US-09-794-925-5 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	49
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113  
38 OleuGlyLeu  
114 CCGGGGCTG 41  
123

Sequence name: rnpbp2ndb:US-09-681-442-5

Sequence documentation:

/ Sequence 5, Application US/09681442  
/ Patent No. US20020081634A1  
/ GENERAL INFORMATION:  
/ APPLICANT: Gurney, Mark E.  
/ APPLICANT: Bienkowski, Michael J.  
/ APPLICANT: Heinriksen, Robert L.  
/ APPLICANT: Parodi, Luis A.  
/ APPLICANT: Yan, Riqiang  
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
/ FILE REFERENCE: 28341/6280FG  
/ CURRENT APPLICATION NUMBER: US/09/681,442  
/ CURRENT FILING DATE: 2001-04-05

/ PRIOR APPLICATION NUMBER: 09/416,901

/ PRIOR FILING DATE: 1999-10-13

/ PRIOR APPLICATION NUMBER: 60/155,493

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: 09/404,133

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: PCT/US99/20881

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: 60/101,594

/ PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 73

/ SOFTWARE: PatentIn Ver. 2.0

/ SEQ ID NO 5

/ LENGTH: 1977

/ TYPE: DNA

/ ORGANISM: Homo sapiens

US-09-681-442-5

Alignment of: us-10-726-967a-1 x US-09-681-442-5 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	49
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113  
38 OleuGlyLeu 41  
114 CCGGGGCTG 123

Sequence name: rnpbp2ndb:US-09-908-943A-3

Sequence documentation:

/ Sequence 3, Application US/09908943A  
/ Publication No. US20030017991A1  
/ GENERAL INFORMATION:  
/ APPLICANT: Van, Riqiang  
/ APPLICANT: Tomasselli, Alfredo G.  
/ APPLICANT: Gurney, Mark E.  
/ APPLICANT: Emmons, Thomas L.  
/ APPLICANT: Bienkowski, Mike J.  
/ APPLICANT: Heinriksen, Robert L.  
/ TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
/ FILE REFERENCE: 29915/00281A.US1  
/ CURRENT APPLICATION NUMBER: US/09/908,943A  
/ PRIOR FILING DATE: 2001-07-19  
/ PRIOR APPLICATION NUMBER: 60/219,795  
/ PRIOR FILING DATE: 2000-07-19  
/ NUMBER OF SEQ ID NOS: 197  
/ SOFTWARE: PatentIn Ver. 2.0  
/ SEQ ID NO 3  
/ LENGTH: 1977  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens  
US-09-908-943A-3

Alignment of: us-10-726-967a-1 x US-09-908-943A-3 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	49
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGAGCAGGCGATCGGCTGCCCCCGCAGCGGCGCTGGGGGCGCCCC 113  
|||||  
38 oLeuGlyLeu 41  
|||||  
114 CCTGGGGCTG 123

Sequence name: rnpb2ndb:US-09-869-414-5

Sequence documentation:  
; Sequence 5, Application US/09869414  
; Publication No. US20030077226A1  
; GENERAL INFORMATION:  
; APPLICANT: Beinkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M  
; CURRENT APPLICATION NUMBER: US/09/869,414  
; CURRENT FILING DATE: 2001-06-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 5  
; LENGTH: 1977  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-869-414-5

Alignment of: us-10-726-967a-1 x US-09-869-414-5 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	49
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGAGCAGGCGATCGGCTGCCCCCGCAGCGGCGCTGGGGGCGCCCC 113  
|||||  
38 oLeuGlyLeu 41  
|||||  
114 CCTGGGGCTG 123

Sequence name: rnpb2ndb:US-09-548-366-5

Sequence documentation:  
; Sequence 5, Application US/09548366  
; Publication No. US20030104365A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND

TITLE OF INVENTION: USES THEREFOR

FILE REFERENCE: 28341/6280A

CURRENT APPLICATION NUMBER: US/09/548,366

CURRENT FILING DATE: 2000-04-12

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 65

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 5

LENGTH: 1977

TYPE: DNA

ORGANISM: Homo sapiens

US-09-548-366-5

Alignment of: us-10-726-967a-1 x US-09-548-366-5 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	49
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGAGCAGGCGATCGGCTGCCCCCGCAGCGGCGCTGGGGGCGCCCC 113  
|||||  
38 oLeuGlyLeu 41  
|||||  
114 CCTGGGGCTG 123

Sequence name: rnpb2ndb:US-10-652-927-5

Sequence documentation:  
; Sequence 5, Application US/10652927  
; Publication No. US20040043408A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 28915/6280N3  
; CURRENT APPLICATION NUMBER: US/10/652,927  
; CURRENT FILING DATE: 2003-08-29  
; PRIOR APPLICATION NUMBER: 09/794,925  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 5  
; LENGTH: 1977  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-652-927-5

Alignment of: us-10-726-967a-1 x US-10-652-927-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	EScore:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGAGCGGCGCTGGGGGGGGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-10-652-830-5

Sequence documentation:

```
; Sequence 5, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-830-5
```

Alignment of: us-10-726-967a-1 x US-10-652-830-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	EScore:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGAGCGGCGCTGGGGGGGGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-10-652-045-5

Sequence documentation:

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; Sequence 5, Application US/10652045
; Publication No. US2004016507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-045-5
```

Alignment of: us-10-726-967a-1 x US-10-652-045-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	EScore:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGAGCGGCGCTGGGGGGGGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-10-476-935-5

Sequence documentation:

```
; Sequence 5, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
```

SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 5  
; LENGTH: 1977  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-476-935-5

Alignment of: us-10-726-967a-1 x US-10-476-935-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHlglyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTGCGACGCGGCTGGGGGGCCCC 113
38 oleuGlyLeu
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-801-487-3

Sequence documentation:

Sequence 3, Application US/10801487  
Publication No. US20040241792A1  
GENERAL INFORMATION:  
APPLICANT: Yan et al.  
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
FILE REFERENCE: 29915/00281F  
CURRENT APPLICATION NUMBER: US/10/801,487  
CURRENT FILING DATE: 2004-03-16  
PRIOR APPLICATION NUMBER: 09/908,943  
PRIOR FILING DATE: 2001-07-19  
PRIOR APPLICATION NUMBER: 60/219,795  
PRIOR FILING DATE: 2000-07-19  
NUMBER OF SEQ ID NOS: 197  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-801-487-3

Alignment of: us-10-726-967a-1 x US-10-801-487-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHlglyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTGCGACGCGGCTGGGGGGCCCC 113
38 oleuGlyLeu
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-801-938-3

Sequence documentation:

Sequence 3, Application US/10801938  
Publication No. US20040253706A1  
GENERAL INFORMATION:  
APPLICANT: Yan et al.  
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
FILE REFERENCE: 29915/00281D  
CURRENT APPLICATION NUMBER: US/10/801,938  
CURRENT FILING DATE: 2004-03-16  
PRIOR APPLICATION NUMBER: 09/908,943  
PRIOR FILING DATE: 2001-07-19  
PRIOR APPLICATION NUMBER: 60/219,795  
PRIOR FILING DATE: 2000-07-19  
NUMBER OF SEQ ID NOS: 197  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-801-938-3

Alignment of: us-10-726-967a-1 x US-10-801-938-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHlglyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGCTGCCCTGCGACGCGGCTGGGGGGCCCC 113
38 oleuGlyLeu
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-801-509-3

Sequence documentation:

Sequence 3, Application US/10801509  
Publication No. US20040254341A1  
GENERAL INFORMATION:  
APPLICANT: Yan et al.  
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
FILE REFERENCE: 29915/00281C  
CURRENT APPLICATION NUMBER: US/10/801,509  
CURRENT FILING DATE: 2004-03-16  
PRIOR APPLICATION NUMBER: 09/908,943  
PRIOR FILING DATE: 2001-07-19  
PRIOR APPLICATION NUMBER: 60/219,795  
PRIOR FILING DATE: 2000-07-19  
NUMBER OF SEQ ID NOS: 197  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-801-509-3

Alignment of: us-10-726-967a-1 x US-10-801-509-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

## Alignment:

22 ThrglnHieglYlIeaRgleuProleuAArgSerGlyLeuGlyAlaApr 38  
|||||  
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 113  
38 OleuGlyLeu 41  
|||||  
114 CCGGGGGCTG 123

Sequence name: rnpbp2ndb:US-10-801-486-3

## Sequence documentation:

/ Sequence 3, Application US/10801486  
/ Publication No. US20040254342A1  
/ GENERAL INFORMATION:  
/ APPLICANT: Yan et al.  
/ TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
/ FILE REFERENCE: 29915/00281B  
/ CURRENT APPLICATION NUMBER: US/10/801,486  
/ CURRENT FILING DATE: 2004-03-16  
/ PRIOR APPLICATION NUMBER: 09/908,943  
/ PRIOR FILING DATE: 2001-07-19  
/ PRIOR APPLICATION NUMBER: 60/219,795  
/ PRIOR FILING DATE: 2000-07-19  
/ NUMBER OF SEQ ID NOS: 197  
/ SOFTWARE: PatentIn Ver. 2.0  
/ SEQ ID NO 3  
/ LENGTH: 1977  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens  
US-10-801-486-3

Alignment of: us-10-726-967a-1 x US-10-801-486-3 ..

## Alignment segment 1/1: (+)

Matching length:	Quality:	Score:
20	104.00	49
Matching Percent Similarity: 100.00		20
Total length: 20		
Matching Percent Identity: 100.00		
Total Percent Identity: 100.00		

## Alignment:

22 ThrglnHieglYlIeaRgleuProleuAArgSerGlyLeuGlyAlaApr 38  
|||||  
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 113  
38 OleuGlyLeu 41  
|||||  
114 CCGGGGGCTG 123

Sequence name: rnpbp2ndb:US-10-940-867-5

## Sequence documentation:

/ Sequence 5, Application US/10940867  
/ Publication No. US20050026256A1  
/ GENERAL INFORMATION:  
/ APPLICANT: Gurney, Mark E.  
/ APPLICANT: Bienkowski, Michael J.  
/ APPLICANT: Heinrichson, Robert L.  
/ APPLICANT: Parodi, Luis A.  
/ APPLICANT: Yan, Riqiang  
/ APPLICANT: Pharmacia & Upjohn Company  
/ TITLE OF INVENTION: Alzheimer's Disease Secretase  
/ FILE REFERENCE: 6177, PCPA  
/ CURRENT APPLICATION NUMBER: US/10/940,867  
/ CURRENT FILING DATE: 2004-09-14  
/ PRIOR APPLICATION NUMBER: US 09/806,194  
/ PRIOR FILING DATE: 2001-03-26  
/ PRIOR APPLICATION NUMBER: US 60/101,594  
/ PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 49  
/ SOFTWARE: PatentIn Ver. 2.0  
/ SEQ ID NO 5  
/ LENGTH: 1977  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens  
US-10-940-867-5

Alignment of: us-10-726-967a-1 x US-10-940-867-5 ..

## Alignment segment 1/1: (+)

Matching length:	Quality:	Score:
20	104.00	49
Matching Percent Similarity: 100.00		20
Total length: 20		
Matching Percent Identity: 100.00		
Total Percent Identity: 100.00		

## Alignment:

22 ThrglnHieglYlIeaRgleuProleuAArgSerGlyLeuGlyAlaApr 38  
|||||  
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 113  
38 OleuGlyLeu 41  
|||||  
114 CCGGGGGCTG 123

Sequence name: rnpbp2ndb:US-10-477-076-5

## Sequence documentation:

/ Sequence 5, Application US/10477076  
/ Publication No. US20050080232A1  
/ GENERAL INFORMATION:  
/ APPLICANT: Beinowski et al.  
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES THEREFOR  
/ FILE REFERENCE: 28341/6280M2  
/ CURRENT APPLICATION NUMBER: US/10/477,076  
/ CURRENT FILING DATE: 2003-11-06  
/ PRIOR APPLICATION NUMBER: 09/416,901  
/ PRIOR FILING DATE: 1998-10-13  
/ PRIOR APPLICATION NUMBER: 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 09/404,133  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: PCT/US99/20881  
/ PRIOR FILING DATE: 1998-09-23  
/ PRIOR APPLICATION NUMBER: 60/101,594  
/ PRIOR FILING DATE: 1998-09-24  
/ NUMBER OF SEQ ID NOS: 73  
/ SOFTWARE: PatentIn Ver. 2.0  
/ SEQ ID NO 5  
/ LENGTH: 1977  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens  
US-10-477-076-5

Alignment of: us-10-726-967a-1 x US-10-477-076-5 ..

## Alignment segment 1/1: (+)

Matching length:	Quality:	Score:
20	104.00	49
Matching Percent Similarity: 100.00		20
Total length: 20		
Matching Percent Identity: 100.00		
Total Percent Identity: 100.00		

## Alignment:

22 ThrglnHieglYlIeaRgleuProleuAArgSerGlyLeuGlyAlaApr 38  
|||||  
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 113



38 oLeuGlyLeu  
|||||  
114 CCTGGGGCTG

41  
123

Sequence name: rnpb2ndb:US-10-801-493-3

Sequence documentation:

Sequence 3, Application US/10801493  
Publication No. US20050096457A1  
GENERAL INFORMATION:  
APPLICANT: Yan et al.  
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
FILE REFERENCE: 29915/002818  
CURRENT APPLICATION NUMBER: US/10/801,493  
CURRENT FILING DATE: 2004-03-16  
PRIOR APPLICATION NUMBER: 09/908,943  
PRIOR FILING DATE: 2001-07-19  
PRIOR APPLICATION NUMBER: 60/219,795  
PRIOR FILING DATE: 2000-07-19  
NUMBER OF SEQ ID NOS: 197  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-801-493-3

Alignment of: us-10-726-967a-1 x US-10-801-493-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Base:	49
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGACGACGCGATCCGCTGCCCTGGCGACGCGCTGGGGGGGCCCC 113  
38 oLeuGlyLeu 41  
|||||  
114 CCTGGGGCTG 123

Sequence name: rnpb2ndb:US-09-794-927-3

Sequence documentation:

Sequence 3, Application US/09794927  
Patent No. US20010016324A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280RG  
CURRENT APPLICATION NUMBER: US/09/794,927  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-927-3

Alignment of: us-10-726-967a-1 x US-09-794-927-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Base:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGACGACGCGATCCGCTGCCCTGGCGACGCGCTGGGGGGGCCCC 113  
38 oLeuGlyLeu 41  
|||||  
114 CCTGGGGCTG 123

Sequence name: rnpb2ndb:US-09-795-847-3

Sequence documentation:

Sequence 3, Application US/09795847  
Patent No. US20010018208A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280RG  
CURRENT APPLICATION NUMBER: US/09/795,847  
CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-795-847-3

Alignment of: us-10-726-967a-1 x US-09-795-847-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Base:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHicGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCGACACGGCATCCGGCTGCCCTGGCGACAGCGGCTGGGGGGCCCC 113
38 OLeuGlyLeu 41
114 CCTGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-09-794-743-3

Sequence documentation:

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/ Sequence 3, Application US/09794743
/ Patent No. US20010021391A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
/ TITLE OF INVENTION: USES
/ FILE REFERENCE: 28341/6280BC
/ CURRENT APPLICATION NUMBER: US/09/794,743
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ US-09-794-743-3
```

Alignment of: us-10-726-967a-1 x US-09-794-743-3 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Total length:	49.2
Matching	Percent Similarity:	100.00	Matching	Percent Identity:	100.00
Total	Percent Similarity:	100.00	Total	Percent Identity:	100.00
Gaps: 0					

Alignment:

```
22 ThrGlnHicGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCGACACGGCATCCGGCTGCCCTGGCGACAGCGGCTGGGGGGCCCC 113
38 OLeuGlyLeu 41
114 CCTGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-09-794-748-3

Sequence documentation:

```
/ Sequence 3, Application US/09794748
/ Patent No. US20020037315A1
/ GENERAL INFORMATION:
```

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinrichson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND

TITLE OF INVENTION: USES

TITLE OF INVENTION: THEREFOR

FILE REFERENCE: 28341/6280UL

CURRENT APPLICATION NUMBER: US/09/794,748

CURRENT FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 3

LENGTH: 2070

TYPE: DNA

ORGANISM: Homo sapiens

US-09-794-748-3

Alignment of: us-10-726-967a-1 x US-09-794-748-3 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Total length:	49.2
Matching	Percent Similarity:	100.00	Matching	Percent Identity:	100.00
Total	Percent Similarity:	100.00	Total	Percent Identity:	100.00
Gaps: 0					

Alignment:

```
22 ThrGlnHicGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCGACACGGCATCCGGCTGCCCTGGCGACAGCGGCTGGGGGGCCCC 113
38 OLeuGlyLeu 41
114 CCTGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-09-794-925-3

Sequence documentation:

```
/ Sequence 3, Application US/09794925
/ Patent No. US20020064819A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 28341/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
```

PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-925-3

Alignment of: us-10-726-967a-1 x US-09-794-925-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1eGly1leArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCGGCTGCCCTCGCGACGCGGCTGGGGGGGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-681-442-3

Sequence documentation:

Sequence 3, Application US/09681442  
Patent No. US20020081634A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280FG  
CURRENT APPLICATION NUMBER: US/09/681,442  
CURRENT FILING DATE: 2001-04-05  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-681-442-3

Alignment of: us-10-726-967a-1 x US-09-681-442-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1eGly1leArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCGGCTGCCCTCGCGACGCGGCTGGGGGGGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-908-943A-1

Sequence documentation:

Sequence 1, Application US/09908943A  
Publication No. US20030017991A1  
GENERAL INFORMATION:  
APPLICANT: Yan, Riqiang  
APPLICANT: Tomaselli, Alfredo G.  
APPLICANT: Gurney, Mark E.  
APPLICANT: Emmons, Thomas L.  
APPLICANT: Bienkowski, Mike J.  
APPLICANT: Heinrichson, Robert L.  
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
FILE REFERENCE: 29915/00281A, US1  
CURRENT APPLICATION NUMBER: US/09/908,943A  
CURRENT FILING DATE: 2001-07-19  
PRIOR APPLICATION NUMBER: 60/219,795  
PRIOR FILING DATE: 2000-07-19  
NUMBER OF SEQ ID NOS: 197  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 1  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-908-943A-1

Alignment of: us-10-726-967a-1 x US-09-908-943A-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1eGly1leArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCGGCTGCCCTCGCGACGCGGCTGGGGGGGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rnpb2ndb:US-09-869-414-3

Sequence documentation:

Sequence 3, Application US/09869414  
Publication No. US20030077226A1  
GENERAL INFORMATION:  
APPLICANT: Bienkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M  
CURRENT APPLICATION NUMBER: US/09/869,414  
CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23

```
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patent In Ver. 2.0
/ SEQ ID NO 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-869-414-3
```

Alignment of: us-10-726-967a-1 x US-09-869-414-3 ..

Alignment segment 1/1: (+)

Quality: 104.00	Score: 49.2
Matching length: 20	Total length: 20
Matching Percent Similarity: 100.00	Matching Percent Identity: 100.00
Total Percent Similarity: 100.00	Total Percent Identity: 100.00
Gaps: 0	

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGGATCCGGCTGCCCCCTGCGACGGGCGCTGGGGGCGCCCC 113
38 oleuGlyLeu
|||||
114 CCGGGGCGCTG
123
```

Sequence name: rnpbp2ndb:US-09-548-366-3

Sequence documentation:

```
/ Sequence 3, Application US/09548366
/ Publication No. US20030104365A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
/ FILE REFERENCE: 28341/6280A
/ CURRENT APPLICATION NUMBER: US/09/548,366
/ PRIOR APPLICATION NUMBER: 2000-04-12
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 65
/ SOFTWARE: Patent In Ver. 2.0
/ SEQ ID NO 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-548-366-3
```

Alignment of: us-10-726-967a-1 x US-09-548-366-3 ..

Alignment segment 1/1: (+)

Quality: 104.00	Score: 49.2
Matching length: 20	Total length: 20
Matching Percent Similarity: 100.00	Matching Percent Identity: 100.00

Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGGATCCGGCTGCCCCCTGCGACGGGCGCTGGGGGCGCCCC 113
38 oleuGlyLeu
|||||
114 CCGGGGCGCTG
123
```

Sequence name: rnpbp2ndb:US-10-652-927-3

Sequence documentation:

```
/ Sequence 3, Application US/10652927
/ Publication No. US20040043408A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N3
/ CURRENT APPLICATION NUMBER: US/10/652,927
/ PRIOR APPLICATION NUMBER: 2003-08-29
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: Patent In Ver. 2.0
/ SEQ ID NO 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-10-652-927-3
```

Alignment of: us-10-726-967a-1 x US-10-652-927-3 ..

Alignment segment 1/1: (+)

Quality: 104.00	Score: 49.2
Matching length: 20	Total length: 20
Matching Percent Similarity: 100.00	Matching Percent Identity: 100.00
Total Percent Similarity: 100.00	Total Percent Identity: 100.00
Gaps: 0	

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGGATCCGGCTGCCCCCTGCGACGGGCGCTGGGGGCGCCCC 113
38 oleuGlyLeu
|||||
114 CCGGGGCGCTG
123
```

Sequence name: rnpbp2ndb:US-10-652-830-3

Sequence documentation:

```
/ Sequence 3, Application US/10652830
/ Publication No. US20040048303A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
```

TITLE OF INVENTION: Therefor  
FILE REFERENCE: 29915/6280N1  
CURRENT APPLICATION NUMBER: US/10/652,830  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-652-830-3

Alignment of: us-10-726-967a-1 x US-10-652-830-3 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 49.2
Matching Percent Similarity:	100.00	20
Total length:		20
Total Percent Identity:	100.00	100.00
Gaps:	0	

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-652-045-3

Sequence documentation:

Sequence 3, Application US/10652045  
Publication No. US2004016507A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N2  
CURRENT APPLICATION NUMBER: US/10/652,045  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA

ORGANISM: Homo sapiens  
US-10-652-045-3

Alignment of: us-10-726-967a-1 x US-10-652-045-3 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 49.2
Matching Percent Similarity:	100.00	20
Total length:		20
Total Percent Identity:	100.00	100.00
Gaps:	0	

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rnpb2ndb:US-10-476-935-3

Sequence documentation:

Sequence 3, Application US/10476935  
Publication No. US20040234976A1  
GENERAL INFORMATION:  
APPLICANT: Belinkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M1  
CURRENT APPLICATION NUMBER: US/10/476,935  
CURRENT FILING DATE: 2003-11-06  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-476-935-3

Alignment of: us-10-726-967a-1 x US-10-476-935-3 ..

Alignment segment 1/1: (+)

Matching length:	Quality: 104.00	Score: 49.2
Matching Percent Similarity:	100.00	20
Total length:		20
Total Percent Identity:	100.00	100.00
Gaps:	0	

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-10-801-487-1

Sequence documentation:

```
/ Sequence 1, Application US/10801487
/ Publication No. US20040241792A1
/ GENERAL INFORMATION:
/ APPLICANT: Yan et al.
/ TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
/ FILE REFERENCE: 29915/00281F
/ CURRENT APPLICATION NUMBER: US/10/801,487
/ PRIOR FILING DATE: 2004-03-16
/ PRIOR APPLICATION NUMBER: 09/908,943
/ PRIOR FILING DATE: 2001-07-19
/ PRIOR APPLICATION NUMBER: 60/219,795
/ PRIOR FILING DATE: 2000-07-19
/ NUMBER OF SEQ ID NOS: 197
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 1
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-10-801-487-1
```

Alignment of: us-10-726-967a-1 x US-10-801-487-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGGCGGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-10-801-938-1

Sequence documentation:

```
/ Sequence 1, Application US/10801938
/ Publication No. US20040253706A1
/ GENERAL INFORMATION:
/ APPLICANT: Yan et al.
/ TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
/ FILE REFERENCE: 29915/00281D
/ CURRENT APPLICATION NUMBER: US/10/801,938
/ PRIOR FILING DATE: 2004-03-16
/ PRIOR APPLICATION NUMBER: 09/908,943
/ PRIOR FILING DATE: 2001-07-19
/ PRIOR APPLICATION NUMBER: 60/219,795
/ PRIOR FILING DATE: 2000-07-19
/ NUMBER OF SEQ ID NOS: 197
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 1
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-10-801-938-1
```

Alignment of: us-10-726-967a-1 x US-10-801-938-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00

Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGGCGGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-10-801-509-1

Sequence documentation:

```
/ Sequence 1, Application US/10801509
/ Publication No. US20040254341A1
/ GENERAL INFORMATION:
/ APPLICANT: Yan et al.
/ TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
/ FILE REFERENCE: 29915/00281C
/ CURRENT APPLICATION NUMBER: US/10/801,509
/ PRIOR FILING DATE: 2004-03-16
/ PRIOR APPLICATION NUMBER: 09/908,943
/ PRIOR FILING DATE: 2001-07-19
/ PRIOR APPLICATION NUMBER: 60/219,795
/ PRIOR FILING DATE: 2000-07-19
/ NUMBER OF SEQ ID NOS: 197
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 1
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-10-801-509-1
```

Alignment of: us-10-726-967a-1 x US-10-801-509-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGGCGGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rnpbp2ndb:US-10-801-486-1

Sequence documentation:

```
/ Sequence 1, Application US/10801486
/ Publication No. US20040254342A1
/ GENERAL INFORMATION:
/ APPLICANT: Yan et al.
/ TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
/ FILE REFERENCE: 29915/00281B
/ CURRENT APPLICATION NUMBER: US/10/801,486
/ PRIOR FILING DATE: 2004-03-16
/ PRIOR APPLICATION NUMBER: 09/908,943
/ PRIOR FILING DATE: 2001-07-19
/ PRIOR APPLICATION NUMBER: 60/219,795
/ PRIOR FILING DATE: 2000-07-19
/ NUMBER OF SEQ ID NOS: 197
/ SOFTWARE: PatentIn Ver. 2.0
```

SEQ ID NO 1  
; LENGTH: 2070  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-801-486-1

Alignment of: us-10-726-967a-1 x US-10-801-486-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnH1sgly1leargleupProleuArgserglyLeuGlyValAlaPr 38  
|||  
64 ACCGACGACGCGATCCGCTGCCCTGCGCAGCGGCGCTGGGGGGCGCCCC 113  
|||  
38 oleuGlyLeu 41  
|||  
114 CCTGGGGGCTG 123

Sequence name: rnpb2ndb:US-10-940-867-3

Sequence documentation:

; Sequence 3, Application US/10940867  
; Publication No. US20050026256A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riglang  
; APPLICANT: Pharmacia & Upjohn Company  
; TITLE OF INVENTION: Alzheimer's Disease Secretase  
; FILE REFERENCE: 6177.FCPA  
; CURRENT APPLICATION NUMBER: US/10/940,867  
; CURRENT FILING DATE: 2004-09-14  
; PRIOR APPLICATION NUMBER: US 09/806,194  
; PRIOR FILING DATE: 2001-03-26  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 49  
; SOFTWARE: Patentln Ver. 2.0  
; SEQ ID NO 3  
; LENGTH: 2070  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-940-867-3

Alignment of: us-10-726-967a-1 x US-10-940-867-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnH1sgly1leargleupProleuArgserglyLeuGlyValAlaPr 38  
|||  
64 ACCGACGACGCGATCCGCTGCCCTGCGCAGCGGCGCTGGGGGGCGCCCC 113  
|||  
38 oleuGlyLeu 41  
|||  
114 CCTGGGGGCTG 123

Sequence name: rnpb2ndb:US-10-477-076-3

Sequence documentation:

; Sequence 3, Application US/10477076  
; Publication No. US20050080232A1  
; GENERAL INFORMATION:  
; APPLICANT: Bienkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M2  
; CURRENT APPLICATION NUMBER: US/10/477,076  
; CURRENT FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: Patentln Ver. 2.0  
; SEQ ID NO 3  
; LENGTH: 2070  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-477-076-3

Alignment of: us-10-726-967a-1 x US-10-477-076-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnH1sgly1leargleupProleuArgserglyLeuGlyValAlaPr 38  
|||  
64 ACCGACGACGCGATCCGCTGCCCTGCGCAGCGGCGCTGGGGGGCGCCCC 113  
|||  
38 oleuGlyLeu 41  
|||  
114 CCTGGGGGCTG 123

Sequence name: rnpb2ndb:US-10-801-493-1

Sequence documentation:

; Sequence 1, Application US/10801493  
; Publication No. US20050096457A1  
; GENERAL INFORMATION:  
; APPLICANT: Yan et al.  
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
; FILE REFERENCE: 29915/00281E  
; CURRENT APPLICATION NUMBER: US/10/801,493  
; CURRENT FILING DATE: 2004-03-16  
; PRIOR APPLICATION NUMBER: 09/908,943  
; PRIOR FILING DATE: 2001-07-19  
; PRIOR APPLICATION NUMBER: 60/219,795  
; PRIOR FILING DATE: 2000-07-19  
; NUMBER OF SEQ ID NOS: 197  
; SOFTWARE: Patentln Ver. 2.0  
; SEQ ID NO 1  
; LENGTH: 2070  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-801-493-1

Alignment of: us-10-726-967a-1 x US-10-801-493-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	49.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIpr 38
|||||
64 ACCGACGACGGGATCCGGCTGCCCTTGGCGAGCGGCTGGGGGGCCCCC 113
38 OLeuGlyLeu
|||||
114 CCTGGGGGCTG                                     123
```

Sequence name: rnpbp2ndb:US-10-466-258-1

Sequence documentation:

```
/ Sequence 1, Application US/10466258
/ Publication No. US20040132096A1
/ GENERAL INFORMATION:
/ APPLICANT: GLAXO GROUP LIMITED
/ TITLE OF INVENTION: ASSAY
/ FILE REFERENCE: P80966 GCM
/ CURRENT APPLICATION NUMBER: US/10/466,258
/ CURRENT FILING DATE: 2003-07-15
/ NUMBER OF SEQ ID NOS: 13
/ SOFTWARE: PatentIn version 3.0
/ SEQ ID NO 1
/ LENGTH: 2526
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ FEATURE:
/ NAME/KEY: CDS
/ LOCATION: (454)..(1959)
US-10-466-258-1
```

Alignment of: us-10-726-967a-1 x US-10-466-258-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	50
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIpr 38
|||||
517 ACCGACGACGGGATCCGGCTGCCCTTGGCGAGCGGCTGGGGGGCCCCC 566
38 OLeuGlyLeu
|||||
567 CCTGGGGGCTG                                     576
```

Sequence name: rnpbp2ndb:US-10-466-391A-1

Sequence documentation:

```
/ Sequence 1, Application US/10466391A
/ Publication No. US20040146953A1
/ GENERAL INFORMATION:
/ APPLICANT: GLAXO GROUP LIMITED
/ TITLE OF INVENTION: ASSAY
/ FILE REFERENCE: P80966 GCM
/ CURRENT APPLICATION NUMBER: US/10/466,391A
```

```
/ CURRENT FILING DATE: 2003-07-15
/ NUMBER OF SEQ ID NOS: 13
/ SOFTWARE: PatentIn version 3.0
/ SEQ ID NO 1
/ LENGTH: 2526
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ FEATURE:
/ NAME/KEY: CDS
/ LOCATION: (454)..(1959)
US-10-466-391A-1
```

Alignment of: us-10-726-967a-1 x US-10-466-391A-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	50
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIpr 38
|||||
517 ACCGACGACGGGATCCGGCTGCCCTTGGCGAGCGGCTGGGGGGCCCCC 566
38 OLeuGlyLeu
|||||
567 CCTGGGGGCTG                                     576
```

Sequence name: rnpbp2ndb:US-09-969-671A-1

Sequence documentation:

```
/ Sequence 1, Application US/09969671A
/ Publication No. US20030036112A1
/ GENERAL INFORMATION:
/ APPLICANT: CHAPMAN, CONRAD G.
/ APPLICANT: MURPHY, KAY
/ APPLICANT: POWELL, DAVID J.
/ APPLICANT: SMITH, TRUDI S.
/ TITLE OF INVENTION: ASP2
/ FILE REFERENCE: GH-70368-D1
/ CURRENT APPLICATION NUMBER: US/09/969,671A
/ CURRENT FILING DATE: 2001-10-03
/ PRIOR APPLICATION NUMBER: UK 9701684.4
/ PRIOR FILING DATE: 1997-01-28
/ PRIOR APPLICATION NUMBER: 09/009,191
/ PRIOR FILING DATE: 1998-01-20
/ PRIOR APPLICATION NUMBER: 09/694,200
/ PRIOR FILING DATE: 2000-10-23
/ NUMBER OF SEQ ID NOS: 6
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 1
/ LENGTH: 2541
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ FEATURE:
/ NAME/KEY: unknown
/ LOCATION: (2455) (2456) (2463) (2478) (2480) (2497) (2507) (2512) (2516)
/ LOCATION: (2520) (2522) (2525) (2529) (2539) (2540)
/ OTHER INFORMATION: wherein n can be represented by a, c, t, or g
US-09-969-671A-1
```

Alignment of: us-10-726-967a-1 x US-09-969-671A-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	50
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00



Alignment: Gaps: 0

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38
64 ACCGACGACGCGATCCGCTGCCCTGCGCAGCGGCGGCGGCGCCCC 113
38 OleuGlyLeu 41
114 CCGGGGCGCTG 123
```

Sequence name: rnpb2ndb:US-10-308-365-1

Sequence documentation:  
Sequence 1, Application US/10308365  
Publication No. US20030109022A1  
GENERAL INFORMATION:  
APPLICANT: CHAPMAN, CONRAD G.  
APPLICANT: MURPHY, KAY  
APPLICANT: POWELL, DAVID J.  
APPLICANT: SMITH, TRUDI S.  
TITLE OF INVENTION: ASP 2  
FILE REFERENCE: GH-70368-2  
CURRENT APPLICATION NUMBER: US/10/308,365  
CURRENT FILING DATE: 2002-12-03  
PRIOR APPLICATION NUMBER: US/09/694,200  
PRIOR FILING DATE: 2000-10-23  
PRIOR APPLICATION NUMBER: UK 9701684.4  
PRIOR FILING DATE: 1997-01-28  
PRIOR APPLICATION NUMBER: 09/009,191  
PRIOR FILING DATE: 1998-01-20  
NUMBER OF SEQ ID NOS: 6  
SOFTWARE: FastSeq for Windows Version 3.0  
SEQ ID NO 1  
LENGTH: 2541  
TYPE: DNA  
ORGANISM: HOMO SAPIENS  
FEATURE: FEATURE: MISCELLANEOUS FEATURE  
NAME/KEY: UNSURE  
LOCATION: (2455) (2456) (2463) (2478) (2480) (2497) (2507) (2509) (2512) (2516) (2520)  
LOCATION: (2522) (2525) (2529) (2539) (2540)  
OTHER INFORMATION: OTHER INFORMATION: n= a, g, c or t  
US-10-308-365-1

Alignment of: us-10-726-967a-1 x US-10-308-365-1 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	50
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38
64 ACCGACGACGCGATCCGCTGCCCTGCGCAGCGGCGGCGGCGCCCC 113
38 OleuGlyLeu 41
114 CCGGGGCGCTG 123
```

Sequence name: rnpb2ndb:US-10-829-717-1

Sequence documentation:  
Sequence 1, Application US/10829717  
Publication No. US20050101556A1  
GENERAL INFORMATION:  
APPLICANT: CHAPMAN, CONRAD G.  
APPLICANT: MURPHY, KAY

APPLICANT: POWELL, DAVID J.  
APPLICANT: SMITH, TRUDI S.  
TITLE OF INVENTION: ASP 2  
FILE REFERENCE: GH-70368-2  
CURRENT APPLICATION NUMBER: US/10/829,717  
CURRENT FILING DATE: 2004-04-22  
PRIOR APPLICATION NUMBER: US/10/308,365  
PRIOR FILING DATE: 2002-12-03  
PRIOR APPLICATION NUMBER: US/09/694,200  
PRIOR FILING DATE: 2000-10-23  
PRIOR APPLICATION NUMBER: UK 9701684.4  
PRIOR FILING DATE: 1997-01-28  
PRIOR APPLICATION NUMBER: 09/009,191  
PRIOR FILING DATE: 1998-01-20  
NUMBER OF SEQ ID NOS: 6  
SOFTWARE: FastSeq for Windows Version 3.0  
SEQ ID NO 1  
LENGTH: 2541  
TYPE: DNA  
ORGANISM: HOMO SAPIENS  
FEATURE: FEATURE: MISCELLANEOUS FEATURE  
NAME/KEY: UNSURE  
LOCATION: (2455) (2456) (2463) (2478) (2480) (2497) (2507) (2509) (2512) (2516) (2520)  
LOCATION: (2522) (2525) (2529) (2539) (2540)  
OTHER INFORMATION: OTHER INFORMATION: n= a, g, c or t  
US-10-829-717-1

Alignment of: us-10-726-967a-1 x US-10-829-717-1 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	50
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38
64 ACCGACGACGCGATCCGCTGCCCTGCGCAGCGGCGGCGGCGCCCC 113
38 OleuGlyLeu 41
114 CCGGGGCGCTG 123
```

Sequence name: rnpb2ndb:US-09-796-264-1

Sequence documentation:  
Sequence 1, Application US/09796264  
Patent No. US20020049303A1  
GENERAL INFORMATION:  
APPLICANT: Tang, Jordan J.N.  
APPLICANT: Koelsch, Gerald  
TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods  
FILE REFERENCE: OMRF 179  
CURRENT APPLICATION NUMBER: US/09/796,264  
CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: 09/604,608  
PRIOR FILING DATE: 2000-06-27  
PRIOR APPLICATION NUMBER: 60/168,060  
PRIOR FILING DATE: 1999-11-30  
PRIOR APPLICATION NUMBER: 60/177,836  
PRIOR FILING DATE: 2000-01-25  
PRIOR APPLICATION NUMBER: 60/178,368  
PRIOR FILING DATE: 2000-01-27  
PRIOR APPLICATION NUMBER: 60/210,292  
PRIOR FILING DATE: 2000-06-08  
NUMBER OF SEQ ID NOS: 31

```
/ SOFTWARE: PatentIn Ver. 2.1
/ SEQ ID NO: 1
/ LENGTH: 3252
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-796-264-1
```

Alignment of: us-10-726-967a-1 x US-09-796-264-1 ..

Alignment segment 1/1: (+)

	Quality:	104.00	EScore:	51.1
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	
Gaps:	0			
Total Percent Identity:			100.00	

Alignment:

```
22 ThrglnHtsgly1leArgLeuProLeuArgSerglyLeuGlyAlaPr 38
|||||
25 ACCCAGCAGCGCATCCGGCTGCCCCCTGCCAGCGGCTGGGGGGCCCCC 74
|||||
38 oLeuGlyLeu 41
|||||
75 CCTGGGGGCTG 84
```

Sequence name: rnpbp2ndb:US-09-845-226-1

Sequence documentation:

```
/ Sequence 1, Application US/09845226
/ Patent No. US20020115600A1
/ GENERAL INFORMATION:
/ APPLICANT: Tang, Jordan J.N.
/ APPLICANT: Hong, Lin
/ TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
/ FILE REFERENCE: OMRF 182
/ CURRENT FILING DATE: 2001-04-30
/ PRIOR FILING DATE: 2001-04-30
/ PRIOR APPLICATION NUMBER: 09/603,713
/ PRIOR FILING DATE: 2000-06-27
/ PRIOR APPLICATION NUMBER: 60/168,060
/ PRIOR FILING DATE: 1999-11-30
/ PRIOR APPLICATION NUMBER: 60/177,836
/ PRIOR FILING DATE: 2000-01-25
/ PRIOR APPLICATION NUMBER: 60/178,368
/ PRIOR FILING DATE: 2000-01-27
/ PRIOR APPLICATION NUMBER: 60/210,292
/ PRIOR FILING DATE: 2000-06-08
/ NUMBER OF SEQ ID NOS: 31
/ SOFTWARE: PatentIn Ver. 2.1
/ SEQ ID NO: 1
/ LENGTH: 3252
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-845-226-1
```

Alignment of: us-10-726-967a-1 x US-09-845-226-1 ..

Alignment segment 1/1: (+)

	Quality:	104.00	EScore:	51.1
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	
Gaps:	0			
Total Percent Identity:			100.00	

Alignment:

```
22 ThrglnHtsgly1leArgLeuProLeuArgSerglyLeuGlyAlaPr 38
|||||
25 ACCCAGCAGCGCATCCGGCTGCCCCCTGCCAGCGGCTGGGGGGCCCCC 74
|||||
```

```
38 oLeuGlyLeu 41
|||||
75 CCTGGGGGCTG 84
```

Sequence name: rnpbp2ndb:US-09-795-903A-1

Sequence documentation:

```
/ Sequence 1, Application US/09795903A
/ Patent No. US20020164760A1
/ GENERAL INFORMATION:
/ APPLICANT: Tang, Jordan J.N.
/ APPLICANT: Tan, Xindi
/ APPLICANT: Koelsch, Gerald
/ TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
/ TITLE OF INVENTION: of Use Thereof
/ FILE REFERENCE: OMRF 179
/ CURRENT APPLICATION NUMBER: US/09/795,903A
/ CURRENT FILING DATE: 2001-02-28
/ PRIOR APPLICATION NUMBER: 09/604,608
/ PRIOR FILING DATE: 2000-06-27
/ PRIOR APPLICATION NUMBER: 60/168,060
/ PRIOR FILING DATE: 1999-11-30
/ PRIOR APPLICATION NUMBER: 60/177,836
/ PRIOR FILING DATE: 2000-01-25
/ PRIOR APPLICATION NUMBER: 60/178,368
/ PRIOR FILING DATE: 2000-01-27
/ PRIOR APPLICATION NUMBER: 60/210,292
/ PRIOR FILING DATE: 2000-06-08
/ NUMBER OF SEQ ID NOS: 31
/ SOFTWARE: PatentIn Ver. 2.1
/ SEQ ID NO: 1
/ LENGTH: 3252
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-795-903A-1
```

Alignment of: us-10-726-967a-1 x US-09-795-903A-1 ..

Alignment segment 1/1: (+)

	Quality:	104.00	EScore:	51.1
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	
Gaps:	0			
Total Percent Identity:			100.00	

Alignment:

```
22 ThrglnHtsgly1leArgLeuProLeuArgSerglyLeuGlyAlaPr 38
|||||
25 ACCCAGCAGCGCATCCGGCTGCCCCCTGCCAGCGGCTGGGGGGCCCCC 74
|||||
38 oLeuGlyLeu 41
|||||
75 CCTGGGGGCTG 84
```

Sequence name: rnpbp2ndb:US-10-032-818-1

Sequence documentation:

```
/ Sequence 1, Application US/10032818
/ Publication No. US20030092629A1
/ GENERAL INFORMATION:
/ APPLICANT: Tang, Jordan J.N.
/ APPLICANT: Koelsch, Gerald
/ APPLICANT: Ghosh, Arun K.
/ TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
/ FILE REFERENCE: 2932.1006-007
/ CURRENT APPLICATION NUMBER: US/10/032,818
/ PRIOR FILING DATE: 2001-12-28
/ PRIOR APPLICATION NUMBER: US 60/275,756
/ PRIOR FILING DATE: 2001-03-14
/ PRIOR APPLICATION NUMBER: US 60/258,705
```

PRIOR FILING DATE: 2000-12-28  
; NUMBER OF SEQ ID NOS: 83  
; SOFTWARE: FASTSEQ for Windows Version 4.0  
; SEQ ID NO 1  
; LENGTH: 3252  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-032-818-1

Alignment of: us-10-726-967a-1 x US-10-032-818-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	51.1
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1gLy1IeArgLeuProLeuAArgSerGlyLeuGlyAla1Ar 38
|||||
25 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGGCGGCGCC 74
|||||
38 OleuGlyLeu 41
|||||
75 CCTGGGGCTG 84
```

Sequence name: rnpb2ndb:US-10-820-953-1

Sequence documentation:

; Sequence 1, Application US/10820953  
; Publication No. US20040167075A1  
; GENERAL INFORMATION:  
; APPLICANT: Tang, Jordan J.N.  
; APPLICANT: Ghosh, Arun K.  
; TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof  
; FILE REFERENCE: OMRF 182  
; CURRENT APPLICATION NUMBER: US/10/820,953  
; CURRENT FILING DATE: 2004-04-08  
; PRIOR APPLICATION NUMBER: US/09/603,713  
; PRIOR FILING DATE: 2000-06-27  
; PRIOR APPLICATION NUMBER: 60/141,363  
; PRIOR FILING DATE: 1999-06-28  
; PRIOR APPLICATION NUMBER: 60/168,060  
; PRIOR FILING DATE: 1999-11-30  
; PRIOR APPLICATION NUMBER: 60/177,836  
; PRIOR FILING DATE: 2000-01-25  
; PRIOR APPLICATION NUMBER: 60/178,368  
; PRIOR FILING DATE: 2000-01-27  
; PRIOR APPLICATION NUMBER: 60/210,292  
; PRIOR FILING DATE: 2000-06-08  
; NUMBER OF SEQ ID NOS: 31  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 1  
; LENGTH: 3252  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-820-953-1

Alignment of: us-10-726-967a-1 x US-10-820-953-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	51.1
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1gLy1IeArgLeuProLeuAArgSerGlyLeuGlyAla1Ar 38
|||||
25 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGGCGGCGCC 74
|||||
38 OleuGlyLeu 41
|||||
75 CCTGGGGCTG 84
```

Sequence name: rnpb2ndb:US-10-773-754-1

Sequence documentation:

; Sequence 1, Application US/10773754  
; Publication No. US20040220079A1  
; GENERAL INFORMATION:  
; APPLICANT: Koelsch, Gerald  
; APPLICANT: Tang, Jordan J. N.  
; APPLICANT: Ghosh, Arun K.  
; APPLICANT: The Board of Trustees of the University of Illinois  
; APPLICANT: Oklahoma Medical Research Foundation  
; TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof  
; FILE REFERENCE: 022266-000930US  
; CURRENT APPLICATION NUMBER: US/10/773,754  
; CURRENT FILING DATE: 2004-02-06  
; PRIOR APPLICATION NUMBER: US 60/141,363  
; PRIOR FILING DATE: 1999-06-28  
; PRIOR APPLICATION NUMBER: US 60/168,060  
; PRIOR FILING DATE: 1999-11-30  
; PRIOR APPLICATION NUMBER: US 60/177,836  
; PRIOR FILING DATE: 2000-01-25  
; PRIOR APPLICATION NUMBER: US 60/178,368  
; PRIOR FILING DATE: 2000-01-27  
; PRIOR APPLICATION NUMBER: US 60/210,292  
; PRIOR FILING DATE: 2000-06-08  
; PRIOR APPLICATION NUMBER: US 09/603,713  
; PRIOR FILING DATE: 2000-06-27  
; PRIOR APPLICATION NUMBER: US 09/845,226  
; PRIOR FILING DATE: 2001-04-30  
; NUMBER OF SEQ ID NOS: 39  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 1  
; LENGTH: 3252  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
; FEATURE:  
; OTHER INFORMATION: memapsin 2  
US-10-773-754-1

Alignment of: us-10-726-967a-1 x US-10-773-754-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	51.1
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1gLy1IeArgLeuProLeuAArgSerGlyLeuGlyAla1Ar 38
|||||
25 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGGCGGCGCC 74
|||||
38 OleuGlyLeu 41
|||||
75 CCTGGGGCTG 84
```

Sequence name: rnpb2ndb:US-10-721-693-21

Sequence documentation:

; Sequence 21, Application US/10721693

```
Publication No. US2004016225A1
GENERAL INFORMATION:
APPLICANT: Medtronic, Inc.
APPLICANT: Kaemmerer, William F.
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
FILE REFERENCE: P11089.00
CURRENT APPLICATION NUMBER: US/10/721,693
PRIORITY FILING DATE: 2003-11-25
NUMBER OF SEQ ID NOS: 23
SOFTWARE: PatentIn version 3.1
SEQ ID NO 21
LENGTH: 5625
TYPE: RNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)..(5625)
OTHER INFORMATION: LOCUS BACE 5625 bp mRNA linear F
OTHER INFORMATION: RI 05-NOV-2002
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
OTHER INFORMATION: anscipt
OTHER INFORMATION: variant d, mRNA.
OTHER INFORMATION: accession NM_138973; VERSION NM_138973.1 GI:21040367
PUBLICATION INFORMATION:
DATABASE ENTRY DATE: 2002-11-05
RELEVANT RESIDUES: (1)..(5625)
US-10-721-693-21

Alignment of: us-10-726-967a-1 x US-10-721-693-21 ..

Alignment segment 1/1: (+)

Matching length: 104.00      Total length: 53.5
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
Total Percent Similarity: 100.00      Total Percent Identity: 100.00
Gaps: 0

Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
510 ACCGACGACGCGCAUCCGCGCCGCCGCGACGCGCGCGGCGGCC 559
38 OleuGlyLeu
|||||
560 CCUGGGGCGUG 569

Sequence name: rnpb2ndb:US-10-852-997-21

Sequence documentation:
Sequence 21, Application US/10852997
Publication No. US20040220132A1
GENERAL INFORMATION:
APPLICANT: Medtronic, Inc.
APPLICANT: Kaemmerer, William F.
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
FILE REFERENCE: P11089.02
CURRENT APPLICATION NUMBER: US/10/852,997
CURRENT FILING DATE: 2004-05-25
PRIOR APPLICATION NUMBER: 10/721,693
PRIORITY FILING DATE: 2003-11-25
NUMBER OF SEQ ID NOS: 53
SOFTWARE: PatentIn version 3.1
SEQ ID NO 21
LENGTH: 5625
TYPE: RNA
ORGANISM: Homo sapiens
FEATURE:
```

```
NAME/KEY: misc_feature
LOCATION: (1)..(5625)
OTHER INFORMATION: LOCUS BACE 5625 bp mRNA linear P
OTHER INFORMATION: RI 05-NOV-2002
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
OTHER INFORMATION: anscipt
OTHER INFORMATION: variant d, mRNA.
OTHER INFORMATION: accession NM_138973; VERSION NM_138973.1 GI:21040367
PUBLICATION INFORMATION:
DATABASE ENTRY DATE: 2002-11-05
RELEVANT RESIDUES: (1)..(5625)
US-10-852-997-21

Alignment of: us-10-726-967a-1 x US-10-852-997-21 ..

Alignment segment 1/1: (+)

Matching length: 104.00      Total length: 53.5
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
Total Percent Similarity: 100.00      Total Percent Identity: 100.00
Gaps: 0

Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
510 ACCGACGACGCGCAUCCGCGCCGCCGCGACGCGCGCGGCGGCC 559
38 OleuGlyLeu
|||||
560 CCUGGGGCGUG 569

Sequence name: rnpb2ndb:US-10-721-693-20

Sequence documentation:
Sequence 20, Application US/10721693
Publication No. US2004016225A1
GENERAL INFORMATION:
APPLICANT: Medtronic, Inc.
APPLICANT: Kaemmerer, William F.
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
FILE REFERENCE: P11089.00
CURRENT APPLICATION NUMBER: US/10/721,693
CURRENT FILING DATE: 2003-11-25
NUMBER OF SEQ ID NOS: 23
SOFTWARE: PatentIn version 3.1
SEQ ID NO 20
LENGTH: 5700
TYPE: RNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)..(5700)
OTHER INFORMATION: LOCUS BACE 5700 bp mRNA linear P
OTHER INFORMATION: RI 21-MAY-2002
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
OTHER INFORMATION: anscipt
OTHER INFORMATION: variant c, mRNA.
OTHER INFORMATION: accession NM_138971; VERSION NM_138971.1 GI:21040363
PUBLICATION INFORMATION:
DATABASE ENTRY DATE: 2002-05-21
RELEVANT RESIDUES: (1)..(5700)
US-10-721-693-20

Alignment of: us-10-726-967a-1 x US-10-721-693-20 ..

Alignment segment 1/1: (+)

Quality: 104.00      Score: 53.6
```

Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38  
|||||  
510 ACCGAGCAGCGCAUCCGGCCGCCGCGCAGCGGCCGCGGCGGCCCC 559  
38 OLeuGlyLeu 41  
|||||  
560 CCUGGGGCGUG 569

Sequence name: rnpb2ndb:US-10-852-997-20

## Sequence documentation:

Sequence 20, Application US/10852997  
Publication No. US20040220132A1  
GENERAL INFORMATION:  
APPLICANT: Medtronic, Inc.  
APPLICANT: Medtronic, Inc.  
APPLICANT: Kaemmerer, William F.  
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Delivery  
TITLE OF INVENTION: siRNA  
FILE REFERENCE: P11089.02  
CURRENT APPLICATION NUMBER: US/10/852,997  
CURRENT FILING DATE: 2004-05-25  
PRIOR APPLICATION NUMBER: 10/721,693  
PRIOR FILING DATE: 2003-11-25  
NUMBER OF SEQ ID NOS: 53  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 20  
LENGTH: 5700  
TYPE: RNA  
ORGANISM: Homo sapiens  
FEATURE:  
NAME/KEY: misc feature  
LOCATION: (1..5700)  
OTHER INFORMATION: LOCUS BACE 5700 bp mRNA linear F  
OTHER INFORMATION: RI 21-MAY-2002  
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr  
OTHER INFORMATION: anscipt  
OTHER INFORMATION: variant C, mRNA.  
OTHER INFORMATION: ACCESSION NM\_138971; VERSION NM\_138971.1 GI:21040363  
PUBLICATION INFORMATION:  
DATABASE ACCESSION NUMBER: NM\_138971.1  
DATABASE ENTRY DATE: 2002-05-21  
RELEVANT RESIDUES: (1)..(5700)  
US-10-852-997-20

Alignment of: us-10-726-967a-1 x US-10-852-997-20 ..

## Alignment segment 1/1: (+)

Quality: 104.00 EScore: 53.6  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38  
|||||  
510 ACCGAGCAGCGCAUCCGGCCGCCGCGCAGCGGCCGCGGCGGCCCC 559  
38 OLeuGlyLeu 41  
|||||  
560 CCUGGGGCGUG 569

Sequence name: rnpb2ndb:US-10-721-693-19

Sequence documentation:  
Sequence 19, Application US/10721693  
Publication No. US20040162255A1  
GENERAL INFORMATION:  
APPLICANT: Medtronic, Inc.  
APPLICANT: Kaemmerer, William F.  
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Delivery  
TITLE OF INVENTION: siRNA  
FILE REFERENCE: P11089.00  
CURRENT APPLICATION NUMBER: US/10/721,693  
CURRENT FILING DATE: 2003-11-25  
NUMBER OF SEQ ID NOS: 23  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 19  
LENGTH: 5757  
TYPE: RNA  
ORGANISM: Homo sapiens  
FEATURE:  
NAME/KEY: misc feature  
LOCATION: (1..5757)  
OTHER INFORMATION: LOCUS BACE 5757 bp mRNA linear P  
OTHER INFORMATION: RI 05-NOV-2002  
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr  
OTHER INFORMATION: anscipt  
OTHER INFORMATION: variant b, mRNA.  
OTHER INFORMATION: ACCESSION NM\_138972; VERSION NM\_138972.1 GI:21040365  
PUBLICATION INFORMATION:  
DATABASE ACCESSION NUMBER: NM\_138972  
DATABASE ENTRY DATE: 2002-11-05  
RELEVANT RESIDUES: (1)..(5757)  
US-10-721-693-19

Alignment of: us-10-726-967a-1 x US-10-721-693-19 ..

## Alignment segment 1/1: (+)

Quality: 104.00 EScore: 53.6  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38  
|||||  
510 ACCGAGCAGCGCAUCCGGCCGCCGCGCAGCGGCCGCGGCGGCCCC 559  
38 OLeuGlyLeu 41  
|||||  
560 CCUGGGGCGUG 569

Sequence name: rnpb2ndb:US-10-852-997-19

## Sequence documentation:

Sequence 19, Application US/10852997  
Publication No. US20040220132A1  
GENERAL INFORMATION:  
APPLICANT: Medtronic, Inc.  
APPLICANT: Medtronic, Inc.  
APPLICANT: Kaemmerer, William F.  
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Delivery  
TITLE OF INVENTION: siRNA  
FILE REFERENCE: P11089.02  
CURRENT APPLICATION NUMBER: US/10/852,997  
CURRENT FILING DATE: 2004-05-25  
PRIOR APPLICATION NUMBER: 10/721,693  
PRIOR FILING DATE: 2003-11-25  
NUMBER OF SEQ ID NOS: 53  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 19  
LENGTH: 5757

TYPE: RNA  
ORGANISM: Homo sapiens  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: (1)..(5757)  
OTHER INFORMATION: LOCUS BACE 5757 bp mRNA linear F  
OTHER INFORMATION: RI 05-NOV-2002  
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr  
OTHER INFORMATION: anacript  
OTHER INFORMATION: variant b, mRNA  
OTHER INFORMATION: ACCESSION NM\_138972; VERSION NM\_138972.1 GI:21040365  
PUBLICATION INFORMATION:  
DATABASE ACCESSION NUMBER: NM\_138972  
DATABASE ENTRY DATE: 2002-11-05  
RELEVANT RESIDUES: (1)..(5757)  
US-10-852-997-19

Alignment of: us-10-726-967a-1 x US-10-852-997-19 ..

Alignment segment 1/1: (+)

Matching length:	104.00	20	Score:	53.6
Matching Percent Similarity:	100.00	20	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	0	Total Percent Identity:	100.00
Gaps:				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
510 ACCCAGCAGCGCAUCCGCGCCGCCGCGCAGCGCGCGCGCGCGCC 559  
38 OleuGlyLeu  
|||||||  
560 CTUGGGGCGUG 41  
569

Sequence name: rnpb2ndb:US-10-721-693-18

Sequence documentation:

Sequence 18, Application US/10721693  
Publication No. US20040162255A1  
GENERAL INFORMATION:  
APPLICANT: Medtronic, Inc.  
APPLICANT: Kaemmerer, William F.  
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv  
FILE REFERENCE: P11089.00  
CURRENT APPLICATION NUMBER: US/10/721,693  
NUMBER OF SEQ ID NOS: 23  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 18  
LENGTH: 5832  
TYPE: RNA  
ORGANISM: Homo sapiens  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: (1)..(5832)  
OTHER INFORMATION: ACCESSION NM\_012104  
OTHER INFORMATION: VERSION NM\_012104.2 GI:21040369  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: (1)..(5832)  
OTHER INFORMATION: LOCUS BACE 5832 bp mRNA linear PRI 05-NOV-2002  
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr  
OTHER INFORMATION: anacript  
OTHER INFORMATION: variant a, mRNA.  
PUBLICATION INFORMATION:  
DATABASE ACCESSION NUMBER: NM\_012104  
DATABASE ENTRY DATE: 2002-11-05  
RELEVANT RESIDUES: (1)..(5832)  
US-10-721-693-18

Alignment of: us-10-726-967a-1 x US-10-721-693-18 ..

Alignment segment 1/1: (+)

Matching length:	104.00	20	Score:	53.7
Matching Percent Similarity:	100.00	20	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	0	Total Percent Identity:	100.00
Gaps:				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
510 ACCCAGCAGCGCAUCCGCGCCGCCGCGCAGCGCGCGCGCGCC 559  
38 OleuGlyLeu  
|||||||  
560 CTUGGGGCGUG 41  
569

Sequence name: rnpb2ndb:US-10-852-997-18

Sequence documentation:

Sequence 18, Application US/10852997  
Publication No. US20040220132A1  
GENERAL INFORMATION:  
APPLICANT: Medtronic, Inc.  
APPLICANT: Kaemmerer, William F.  
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv  
FILE REFERENCE: P11089.02  
CURRENT APPLICATION NUMBER: US/10/852,997  
NUMBER OF SEQ ID NOS: 53  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 18  
LENGTH: 5832  
TYPE: RNA  
ORGANISM: Homo sapiens  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: (1)..(5832)  
OTHER INFORMATION: ACCESSION NM\_012104  
OTHER INFORMATION: VERSION NM\_012104.2 GI:21040369  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: (1)..(5832)  
OTHER INFORMATION: LOCUS BACE 5832 bp mRNA linear PRI 05-NOV-2002  
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr  
OTHER INFORMATION: anacript  
OTHER INFORMATION: variant a, mRNA.  
PUBLICATION INFORMATION:  
DATABASE ACCESSION NUMBER: NM\_012104  
DATABASE ENTRY DATE: 2002-11-05  
RELEVANT RESIDUES: (1)..(5832)  
US-10-852-997-18

Alignment of: us-10-726-967a-1 x US-10-852-997-18 ..

Alignment segment 1/1: (+)

Matching length:	104.00	20	Score:	53.7
Matching Percent Similarity:	100.00	20	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	0	Total Percent Identity:	100.00
Gaps:				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
510 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCGCCCC 559  
38 OleuGlyLeu 41  
|||||  
560 CCGGGGGCTG 569

Sequence name: rnpb2ndb:US-10-723-860-5006

Sequence documentation:

; Sequence 5006, Application US/10723860  
; Publication No. US20040253606A1  
; GENERAL INFORMATION:  
; APPLICANT: Aziz, Natasha  
; APPLICANT: Ginsburg, Wendy M.  
; APPLICANT: Zlotnik, Albert  
; TITLE OF INVENTION: Methods of Diagnosis of Soft Tissue Sarcoma, Compositions &  
; TITLE OF INVENTION: Methods for Screening for Soft Tissue Sarcoma Modulators  
; FILE REFERENCE: 05882.0193.NPUS01  
; CURRENT APPLICATION NUMBER: US/10/723,860  
; CURRENT FILING DATE: 2003-11-26  
; PRIOR APPLICATION NUMBER: 60/429,739  
; PRIOR FILING DATE: 2002-11-26  
; NUMBER OF SEQ ID NOS: 8393  
; SOFTWARE: PatentIn version 3.2  
; SEQ ID NO 5006  
; LENGTH: 5876  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-723-860-5006

Alignment of: us-10-726-967a-1 x US-10-723-860-5006 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	53.7
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
518 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCGCCCC 567  
38 OleuGlyLeu 41  
|||||  
568 CCGGGGGCTG 577

Sequence name: rnpb2ndb:US-10-159-942-4

Sequence documentation:

; Sequence 4, Application US/10159942  
; Publication No. US20030224512A1  
; GENERAL INFORMATION:  
; APPLICANT: Kenneth W. Dobie  
; TITLE OF INVENTION: ANTISENSE MODULATION OF BETA-SITE APP-CLEAVING ENZYME EXPRESSION  
; FILE REFERENCE: RTS-0383  
; CURRENT APPLICATION NUMBER: US/10/159,942  
; CURRENT FILING DATE: 2002-05-31  
; NUMBER OF SEQ ID NOS: 133  
; SEQ ID NO 4  
; LENGTH: 5878  
; TYPE: DNA  
; ORGANISM: H. sapiens  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (455)...(1960)  
US-10-159-942-4

Alignment of: us-10-726-967a-1 x US-10-159-942-4 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	53.7
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
518 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCGCCCC 567  
38 OleuGlyLeu 41  
|||||  
568 CCGGGGGCTG 577

Sequence name: rnpb2ndb:US-10-723-860-284

Sequence documentation:

; Sequence 284, Application US/10723860  
; Publication No. US20040253606A1  
; GENERAL INFORMATION:  
; APPLICANT: Aziz, Natasha  
; APPLICANT: Ginsburg, Wendy M.  
; APPLICANT: Zlotnik, Albert  
; TITLE OF INVENTION: Methods of Diagnosis of Soft Tissue Sarcoma, Compositions &  
; TITLE OF INVENTION: Methods for Screening for Soft Tissue Sarcoma Modulators  
; FILE REFERENCE: 05882.0193.NPUS01  
; CURRENT APPLICATION NUMBER: US/10/723,860  
; CURRENT FILING DATE: 2003-11-26  
; PRIOR APPLICATION NUMBER: 60/429,739  
; PRIOR FILING DATE: 2002-11-26  
; NUMBER OF SEQ ID NOS: 8393  
; SOFTWARE: PatentIn version 3.2  
; SEQ ID NO 284  
; LENGTH: 5878  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-723-860-284

Alignment of: us-10-726-967a-1 x US-10-723-860-284 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	53.7
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
518 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCGCCCC 567  
38 OleuGlyLeu 41  
|||||  
568 CCGGGGGCTG 577

Sequence name: rnpb2ndb:US-10-956-157-1778

Sequence documentation:

; Sequence 1778, Application US/10956157  
; Publication No. US20050118625A1  
; GENERAL INFORMATION:  
; APPLICANT: Wyeth  
; APPLICANT: Mounts, William

TITLE OF INVENTION: NUCLEIC ACID ARRAYS FOR DETECTING GENE EXPRESSION ASSOCIATED WITH  
FILE OF INVENTION: HUMAN OSTEOARTHRITIS AND HUMAN PROTEASES  
FILE REFERENCE: 031896-043000 (AM 101081)  
CURRENT APPLICATION NUMBER: US/10/956,157  
CURRENT FILING DATE: 2004-10-04  
NUMBER OF SEQ ID NOS: 319805  
SOFTWARE: PatentIn version 3.2  
SEQ ID NO 1778  
LENGTH: 5878  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-956-157-1778

Alignment of: us-10-726-967a-1 x US-10-956-157-1778 ..

Alignment segment 1/1: (+)

Matching Percent	Similarity	Length	Score
100.00	100.00	20	53.7
100.00	100.00	20	20
100.00	100.00	20	20

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIpr 38  
518 ACCGACACGCGATCCGGCTGCGCCCTGCGCAGCGCGCTGGGGGGCGCCCG 567  
38 OleuGlyLeu 41  
568 CCGGGGCGCTG 577

Sequence name: rnpbp2ndb:US-09-794-927-7

Sequence documentation:

Sequence 7, Application US/09794927  
Patent No. US20010016324A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Blenkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Ridiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280RG  
CURRENT APPLICATION NUMBER: US/09/794,927  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 7  
LENGTH: 2043  
TYPE: DNA  
ORGANISM: Mus musculus  
US-09-794-927-7

Alignment of: us-10-726-967a-1 x US-09-794-927-7 ..

Alignment segment 1/1: (+)

Quality: 77.00

Score: 121

Matching Percent	Similarity	Length	Score
90.00	90.00	20	80.00
90.00	90.00	20	80.00
90.00	90.00	20	80.00

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIpr 38  
64 ACCGATCTGCGATCCGGCTGCGCCCTTCCGACGCGCGCTGGCAGCGCCACC 113  
38 OleuGlyLeu 41  
114 CCGGGGCGCTG 123

Sequence name: rnpbp2ndb:US-09-795-847-7

Sequence documentation:

Sequence 7, Application US/09795847  
Patent No. US20010018208A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Blenkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Ridiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280DE  
CURRENT APPLICATION NUMBER: US/09/795,847  
CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 7  
LENGTH: 2043  
TYPE: DNA  
ORGANISM: Mus musculus  
US-09-795-847-7

Alignment of: us-10-726-967a-1 x US-09-795-847-7 ..

Alignment segment 1/1: (+)

Matching Percent	Similarity	Length	Score
77.00	77.00	20	121
90.00	90.00	20	80.00
90.00	90.00	20	80.00

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIpr 38  
64 ACCGATCTGCGATCCGGCTGCGCCCTTCCGACGCGCGCTGGCAGCGCCACC 113  
38 OleuGlyLeu 41  
114 CCGGGGCGCTG 123

Sequence name: rnpbp2ndb:US-09-794-743-7

Sequence documentation:



; Sequence 7, Application US/09794743  
; Patent No. US20010021391A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
; TITLE OF INVENTION: USES  
; FILE REFERENCE: 28341/6280BC  
; CURRENT APPLICATION NUMBER: US/09/794,743  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO 7  
; LENGTH: 2043  
; TYPE: DNA  
; ORGANISM: Mus musculus  
; US-09-794-743-7

Alignment of: us-10-726-967a-1 x US-09-794-743-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00		Score:	121
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLar 38
      |||::|||::|||::|||::|||::|||::|||::|||::|||
64 ACCCATCTCGCATCCGGCTGCCCTTCGACGGCGCTGGCAGGGCCACC 113
      |||::|||::|||::|||::|||::|||::|||::|||
38 oleuGlyLeu 41
      |||::|||::|||::|||::|||::|||::|||::|||
114 CCTGGGCGCTG 123
```

Sequence name: rnpb2ndb:US-09-794-748-7

Sequence documentation:  
; Sequence 7, Application US/09794748  
; Patent No. US20020037315A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
; TITLE OF INVENTION: USES  
; FILE REFERENCE: 28341/6280JL  
; CURRENT APPLICATION NUMBER: US/09/794,748  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO 7  
; LENGTH: 2043  
; TYPE: DNA  
; ORGANISM: Mus musculus  
; US-09-794-748-7

Alignment of: us-10-726-967a-1 x US-09-794-748-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00		Score:	121
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLar 38
      |||::|||::|||::|||::|||::|||::|||::|||
64 ACCCATCTCGCATCCGGCTGCCCTTCGACGGCGCTGGCAGGGCCACC 113
      |||::|||::|||::|||::|||::|||::|||::|||
38 oleuGlyLeu 41
      |||::|||::|||::|||::|||::|||::|||::|||
114 CCTGGGCGCTG 123
```

Sequence name: rnpb2ndb:US-09-794-925-7

Sequence documentation:

; Sequence 7, Application US/09794925  
; Patent No. US20020064819A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/6280H1  
; CURRENT APPLICATION NUMBER: US/09/794,925  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO 7  
; LENGTH: 2043  
; TYPE: DNA  
; ORGANISM: Mus musculus  
; US-09-794-925-7

Alignment of: us-10-726-967a-1 x US-09-794-925-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00		Score:	121
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

Matching length: 20      Total length: 20  
Matching Percent Similarity: 90.00      Matching Percent Identity: 80.00  
Total Percent Similarity: 90.00      Total Percent Identity: 80.00  
Gaps: 0

## Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACGCGGCTGGCAGGGCCACC 113
38 oLeuGlyLeu
|||||
114 CCTGGGCGCTG 123
```

Sequence name: rnpb2ndb:US-09-681-442-7

## Sequence documentation:

/ Sequence 7, Application US/09681442  
/ Patent No. US20020081634A1  
/ GENERAL INFORMATION:  
/ APPLICANT: Gurney, Mark E.  
/ APPLICANT: Bienkowski, Michael J.  
/ APPLICANT: Heinrichson, Robert L.  
/ APPLICANT: Parodi, Luis A.  
/ APPLICANT: Yan, Riqiang  
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
/ TITLE OF INVENTION: THEREFOR  
/ FILE REFERENCE: 28341/6280FG  
/ CURRENT APPLICATION NUMBER: US/09/681,442  
/ CURRENT FILING DATE: 2001-04-05  
/ PRIOR APPLICATION NUMBER: 09/416,901  
/ PRIOR FILING DATE: 1999-10-13  
/ PRIOR APPLICATION NUMBER: 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 09/404,133  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: PCT/US99/20881  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 60/101,594  
/ PRIOR FILING DATE: 1998-09-24  
/ NUMBER OF SEQ ID NOS: 73  
/ SOFTWARE: PatentIn Ver. 2.0  
/ SEQ ID NO 7  
/ LENGTH: 2043  
/ TYPE: DNA  
/ ORGANISM: Mus musculus  
US-09-681-442-7

Alignment of: us-10-726-967a-1 x US-09-681-442-7 ..

## Alignment segment 1/1: (+)

	Quality:	77.00		Total length:	121
Matching length:	20			20	
Matching Percent Similarity:	90.00			Matching Percent Identity:	80.00
Total Percent Similarity:	90.00			Total Percent Identity:	80.00
Gaps:	0				

## Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACGCGGCTGGCAGGGCCACC 113
38 oLeuGlyLeu
|||||
114 CCTGGGCGCTG 123
```

Sequence name: rnpb2ndb:US-09-869-414-7

## Sequence documentation:

/ Sequence 7, Application US/09869414

/ Publication No. US20030077226A1

/ GENERAL INFORMATION:  
/ APPLICANT: Bienkowski et al.  
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
/ TITLE OF INVENTION: THEREFOR  
/ FILE REFERENCE: 28341/6280M  
/ CURRENT APPLICATION NUMBER: US/09/869,414  
/ CURRENT FILING DATE: 2001-06-27  
/ PRIOR APPLICATION NUMBER: 09/416,901  
/ PRIOR FILING DATE: 1999-10-13  
/ PRIOR APPLICATION NUMBER: 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 09/404,133  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: PCT/US99/20881  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 60/101,594  
/ PRIOR FILING DATE: 1998-09-24  
/ NUMBER OF SEQ ID NOS: 73  
/ SOFTWARE: PatentIn Ver. 2.0  
/ SEQ ID NO 7  
/ LENGTH: 2043  
/ TYPE: DNA  
/ ORGANISM: Mus musculus  
US-09-869-414-7

Alignment of: us-10-726-967a-1 x US-09-869-414-7 ..

## Alignment segment 1/1: (+)

	Quality:	77.00		Total length:	121
Matching length:	20			20	
Matching Percent Similarity:	90.00			Matching Percent Identity:	80.00
Total Percent Similarity:	90.00			Total Percent Identity:	80.00
Gaps:	0				

## Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACGCGGCTGGCAGGGCCACC 113
38 oLeuGlyLeu
|||||
114 CCTGGGCGCTG 123
```

Sequence name: rnpb2ndb:US-09-548-366-7

## Sequence documentation:

/ Sequence 7, Application US/09548366  
/ Publication No. US20030104365A1  
/ GENERAL INFORMATION:  
/ APPLICANT: Gurney, Mark E.  
/ APPLICANT: Bienkowski, Michael J.  
/ APPLICANT: Heinrichson, Robert L.  
/ APPLICANT: Parodi, Luis A.  
/ APPLICANT: Yan, Riqiang  
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
/ TITLE OF INVENTION: USES THEREFOR  
/ FILE REFERENCE: 28341/6280A  
/ CURRENT APPLICATION NUMBER: US/09/548,366  
/ CURRENT FILING DATE: 2000-04-12  
/ PRIOR APPLICATION NUMBER: 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 09/404,133  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: PCT/US99/20881  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 60/101,594  
/ PRIOR FILING DATE: 1998-09-24  
/ NUMBER OF SEQ ID NOS: 65  
/ SOFTWARE: PatentIn Ver. 2.0  
/ SEQ ID NO 7

LENGTH: 2043  
TYPE: DNA  
ORGANISM: Mus musculus  
US-09-548-366-7

Alignment of: us-10-726-967a-1 x US-09-548-366-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	121
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCATCTCGGCATCGGCTGCCCTTGCACAGCGGCTGCAGGGCCACC 113  
|||  
38 oLeuGlyLeu 41  
|||  
114 CCTGGGCGCTG 123

Sequence name: rnpb2ndb:US-10-652-927-7

Sequence documentation:

Sequence 7, Application US/10652927  
Publication No. US20040043408A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N3  
CURRENT APPLICATION NUMBER: US/10/652,927  
PRIOR FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 7  
LENGTH: 2043  
TYPE: DNA  
ORGANISM: Mus musculus  
US-10-652-927-7

Alignment of: us-10-726-967a-1 x US-10-652-927-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	121
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCATCTCGGCATCGGCTGCCCTTGCACAGCGGCTGCAGGGCCACC 113  
|||

38 oLeuGlyLeu 41  
|||||  
114 CCTGGGCGCTG 123

Sequence name: rnpb2ndb:US-10-652-830-7

Sequence documentation:

Sequence 7, Application US/10652830  
Publication No. US20040048303A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N1  
CURRENT APPLICATION NUMBER: US/10/652,830  
PRIOR FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 7  
LENGTH: 2043  
TYPE: DNA  
ORGANISM: Mus musculus  
US-10-652-830-7

Alignment of: us-10-726-967a-1 x US-10-652-830-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	121
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCATCTCGGCATCGGCTGCCCTTGCACAGCGGCTGCAGGGCCACC 113  
|||  
38 oLeuGlyLeu 41  
|||  
114 CCTGGGCGCTG 123

Sequence name: rnpb2ndb:US-10-652-045-7

Sequence documentation:

Sequence 7, Application US/10652045  
Publication No. US20040166507A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N2  
CURRENT APPLICATION NUMBER: US/10/652,045  
PRIOR FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493

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; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-10-652-045-7
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Alignment of: us-10-726-967a-1 x US-10-652-045-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	121
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

```

22 ThrglnhlsGlylleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|:::|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGCAGCGGCTGGCGGCCACC 113
|:::|||||
38 oleuGlyLeu 41
|:::|||||
114 CTGGGGCCTG 123
```

Sequence name: rnpb2ndb:US-10-476-935-7

```

Sequence documentation:
; Sequence 7, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-10-476-935-7
```

Alignment of: us-10-726-967a-1 x US-10-476-935-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	121
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Similarity:	90.00	Total Percent Identity:	80.00

```

; Gaps: 0
Alignment:
22 ThrglnhlsGlylleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|:::|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGCAGCGGCTGGCGGCCACC 113
|:::|||||
38 oleuGlyLeu 41
|:::|||||
114 CTGGGGCCTG 123
```

Sequence name: rnpb2ndb:US-10-940-867-7

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Sequence documentation:
; Sequence 7, Application US/10940867
; Publication No. US20050026256A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.PCPA
; CURRENT APPLICATION NUMBER: US/10/940,867
; PRIOR FILING DATE: 2004-09-14
; PRIOR APPLICATION NUMBER: US 09/806,194
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-10-940-867-7
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Alignment of: us-10-726-967a-1 x US-10-940-867-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	121
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

```

22 ThrglnhlsGlylleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|:::|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGCAGCGGCTGGCGGCCACC 113
|:::|||||
38 oleuGlyLeu 41
|:::|||||
114 CTGGGGCCTG 123
```

Sequence name: rnpb2ndb:US-10-477-076-7

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Sequence documentation:
; Sequence 7, Application US/10477076
; Publication No. US2005008032A1
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M2
; CURRENT APPLICATION NUMBER: US/10/477,076
; PRIOR FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
```

;; PRIOR FILING DATE: 1999-10-13  
;; PRIOR APPLICATION NUMBER: 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 7  
;; LENGTH: 2043  
;; TYPE: DNA  
;; ORGANISM: Mus musculus  
US-10-477-076-7

Alignment of: us-10-726-967a-1 x US-10-477-076-7 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	121
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCCATCTCGGATCCGGCTGCGCTTGCACAGCGGCTGCGAGGCGCACC 113  
|||||  
38 olenglyLeu 41  
|||||  
114 CCGGGGCGCTG 123

Sequence name: rnpb2ndb:US-09-917-800A-1665

Sequence documentation:

;; Sequence 1665, Application US/09917800A  
;; Patent No. US20020119462A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Mendrick, Donna  
;; APPLICANT: Porter, Mark  
;; APPLICANT: Johnson, Kory  
;; APPLICANT: Castle, Arthur  
;; APPLICANT: Elashoff, Michael  
;; APPLICANT: Gene Logic, Inc.  
;; TITLE OF INVENTION: Molecular Toxicology Modeling  
;; FILE REFERENCE: 44921-5038-US  
;; CURRENT APPLICATION NUMBER: US/09/917,800A  
;; PRIOR FILING DATE: 2001-07-31  
;; PRIOR APPLICATION NUMBER: US 60/222,040  
;; PRIOR FILING DATE: 2000-07-31  
;; PRIOR APPLICATION NUMBER: US 60/222,880  
;; PRIOR FILING DATE: 2000-11-02  
;; PRIOR APPLICATION NUMBER: US 60/290,029  
;; PRIOR FILING DATE: 2001-05-11  
;; PRIOR APPLICATION NUMBER: US 60/290,645  
;; PRIOR FILING DATE: 2001-05-15  
;; PRIOR APPLICATION NUMBER: US 60/292,336  
;; PRIOR FILING DATE: 2001-05-22  
;; PRIOR APPLICATION NUMBER: US 60/295,798  
;; PRIOR FILING DATE: 2001-06-06  
;; PRIOR APPLICATION NUMBER: US 60/297,457  
;; PRIOR FILING DATE: 2001-06-13  
;; PRIOR APPLICATION NUMBER: US 60/298,884  
;; PRIOR FILING DATE: 2001-06-19  
;; PRIOR APPLICATION NUMBER: US 60/303,459  
;; PRIOR FILING DATE: 2001-07-09  
;; NUMBER OF SEQ ID NOS: 1740  
;; SOFTWARE: PatentIn Ver. 2.1

;; SEQ ID NO 1665  
;; LENGTH: 2158  
;; TYPE: DNA  
;; ORGANISM: Rattus norvegicus  
;; FEATURE:  
;; OTHER INFORMATION: Genbank Accession No. US20020119462A1 NM\_019204  
US-09-917-800A-1665

Alignment of: us-10-726-967a-1 x US-09-917-800A-1665 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	122
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
491 ACCCATCTCGGATCCGACTGCGCTTGCACAGCGGCTGCGAGGCGCACC 540  
|||||  
38 olenglyLeu 41  
|||||  
541 CCGGGGCGCTG 550

Sequence name: rnpb2ndb:US-10-721-693-22

Sequence documentation:

;; Sequence 22, Application US/10721693  
;; Publication No. US20040162255A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Medtronic, Inc.  
;; APPLICANT: Kaemmerer, William F.  
;; TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv  
;; TITLE OF INVENTION: siRNA  
;; FILE REFERENCE: P11089.00  
;; CURRENT APPLICATION NUMBER: US/10/721,693  
;; CURRENT FILING DATE: 2003-11-25  
;; NUMBER OF SEQ ID NOS: 23  
;; SOFTWARE: PatentIn version 3.1  
;; SEQ ID NO 22  
;; LENGTH: 3880  
;; TYPE: RNA  
;; ORGANISM: Mus musculus  
;; FEATURE:  
;; NAME/KEY: misc feature  
;; LOCATION: (1)-(3880)  
;; OTHER INFORMATION: LOCUS Bace 3880 bp mRNA linear R  
;; OTHER INFORMATION: OD 07-JAN-2002  
;; OTHER INFORMATION: DEFINITION Mus musculus beta-site APP cleaving enzyme (Bace), mR  
;; OTHER INFORMATION: NA.  
;; OTHER INFORMATION: ACCESSION NM\_011792; VERSION NM\_011792.2 GI:6857758  
;; PUBLICATION INFORMATION:  
;; DATABASE ACCESSION NUMBER: NM\_011792  
;; DATABASE ENTRY DATE: 2002-01-07  
;; RELEVANT RESIDUES: (1)..(3880)  
US-10-721-693-22

Alignment of: us-10-726-967a-1 x US-10-721-693-22 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	127
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHtIeGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38  
|||:::|||||  
491 ACCCAUUCUGGCAUCCGGCGUCCGCCUUCGACGCGCCUGGCAAGGCACC 540  
38 cLeuGlyLeu 41  
541 CCUGGGCCUG 550

Sequence name: rnpbp2ndb:US-10-852-997-22

Sequence documentation:

; Sequence 22, Application US/10852997  
; Publication No. US20040220132a1  
; GENERAL INFORMATION:  
; APPLICANT: Medtronic, Inc.  
; APPLICANT: Kaemmerer, William F.  
; TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Delivery  
; FILE REFERENCE: P11089.02  
; CURRENT APPLICATION NUMBER: US/10/852,997  
; PRIOR FILING DATE: 2004-05-25  
; PRIOR APPLICATION NUMBER: 10/721,693  
; PRIOR FILING DATE: 2003-11-25  
; NUMBER OF SEQ ID NOS: 53  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO: 22  
; LENGTH: 3880  
; TYPE: RNA  
; ORGANISM: Mus musculus  
; FEATURE:  
; NAME/KEY: misc feature  
; LOCATION: (1)..(3880)  
; OTHER INFORMATION: LOCUS Bacc 3880 bp mRNA linear  
; OTHER INFORMATION: DEFINITION Mus musculus beta-site APP cleaving enzyme (Bace), mRNA  
; OTHER INFORMATION: NA.  
; OTHER INFORMATION: ACCESSION NM\_011792; VERSION NM\_011792.2 GI:6857758  
; PUBLICATION INFORMATION:  
; DATABASE ACCESSION NUMBER: NM\_011792  
; DATABASE ENTRY DATE: 2002-01-07  
; RELEVANT RESIDUES: (1)..(3880)  
US-10-852-997-22

Alignment of: us-10-726-967a-1 x US-10-852-997-22 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	127
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHtIeGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38  
|||:::|||||  
491 ACCCAUUCUGGCAUCCGGCGUCCGCCUUCGACGCGCCUGGCAAGGCACC 540  
38 cLeuGlyLeu 41  
541 CCUGGGCCUG 550

Sequence name: rnpbp2ndb:US-10-764-420-2565

Sequence documentation:

; Sequence 2565, Application US/10764420  
; Publication No. US20050084872A1  
; GENERAL INFORMATION:  
; APPLICANT: Lum, Pek Yee  
; APPLICANT: Tan, Yejun  
; APPLICANT: Dai, Hongyue

; TITLE OF INVENTION: Methods for Determining Whether An Agent  
; FILE REFERENCE: ROSAL22057  
; CURRENT APPLICATION NUMBER: US/10/764,420  
; PRIOR FILING DATE: 2004-01-23  
; PRIOR APPLICATION NUMBER: US 60/442,797  
; PRIOR FILING DATE: 2003-01-24  
; PRIOR APPLICATION NUMBER: US 60/474,413  
; PRIOR FILING DATE: 2003-05-30  
; NUMBER OF SEQ ID NOS: 3683  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 2565  
; LENGTH: 3880  
; TYPE: DNA  
; ORGANISM: Mus musculus  
US-10-764-420-2565

Alignment of: us-10-726-967a-1 x US-10-764-420-2565 ..

Alignment segment 1/1: (+)

Quality:	77.00	Score:	127
Matching length:	20	Total length:	20
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00
Gaps:	0		

Alignment:

22 ThrGlnHtIeGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38  
|||:::|||||  
491 ACCCAUUCUGGCAUCCGGCGUCCGCCUUCGACGCGCCUGGCAAGGCACC 540  
38 cLeuGlyLeu 41  
541 CCUGGGCCUG 550

Sequence name: rnpbp2ndb:US-10-466-258-1

Sequence documentation:

; Sequence 1, Application US/10466258  
; Publication No. US20040132096A1  
; GENERAL INFORMATION:  
; APPLICANT: GLAXO GROUP LIMITED  
; TITLE OF INVENTION: ASSAY  
; FILE REFERENCE: P80966 GCM  
; CURRENT APPLICATION NUMBER: US/10/466,258  
; PRIOR FILING DATE: 2003-07-15  
; NUMBER OF SEQ ID NOS: 13  
; SOFTWARE: PatentIn version 3.0  
; SEQ ID NO 1  
; LENGTH: 2526  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (454)..(1959)  
US-10-466-258-1

Alignment of: us-10-726-967a-1 x US-10-466-258-1 ..

Alignment segment 1/1: (-)

Quality:	35.00	Score:	341
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 GlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPro 38  
|||:::|||||

```

237 GGGATCCGGAGCCCGCTACATCGCAGCGGCGGCAGCGCT
196

Sequence name: rnpbp2ndb:US-10-466-391A-1

Sequence documentation:
; Sequence 1, Application US/10466391A
; Publication No. US20040146953A1
; GENERAL INFORMATION:
; APPLICANT: GLAXO GROUP LIMITED
; TITLE OF INVENTION: ASSAY
; FILE REFERENCE: P80966 GCW
; CURRENT APPLICATION NUMBER: US/10/466,391A
; CURRENT FILING DATE: 2003-07-15
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1
; LENGTH: 2526
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (454)..(1959)
US-10-466-391A-1

Alignment of: us-10-726-967a-1 x US-10-466-391A-1 ..

Alignment segment 1/1: (-)

      Quality: 35.00      Escore: 341
      Matching length: 14      Total length: 14
      Matching Percent Similarity: 64.29      Matching Percent Identity: 57.14
      Total Percent Similarity: 64.29      Total Percent Identity: 57.14
      Gaps: 0

Alignment:
25 GLY11EARGLEUPROLEUARGSERGLYLEUGLYGLYALAPro 38
|||||:|||||:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|
237 GGGATCCGGAGCCCGCTACATCGCAGCGGCGGCAGCGCT 196

Sequence name: rnpbp2ndb:US-10-721-693-21

Sequence documentation:
; Sequence 21, Application US/10721693
; Publication No. US20040162255A1
; GENERAL INFORMATION:
; APPLICANT: Medtronic, Inc.
; APPLICANT: Kaemmerer, William F.
; TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Delivery
; TITLE OF INVENTION: sRNA
; FILE REFERENCE: P11089.00
; CURRENT APPLICATION NUMBER: US/10/721,693
; CURRENT FILING DATE: 2003-11-25
; NUMBER OF SEQ ID NOS: 23
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 21
; LENGTH: 5625
; TYPE: RNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (1)..(5625)
; OTHER INFORMATION: LOCUS BACE 5625 bp mRNA linear F
; OTHER INFORMATION: RI 05-NOV-2002
; OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
; OTHER INFORMATION: variant d, mRNA, NM_138973; VERSION NM_138973.1 GI:21040367
; PUBLICATION INFORMATION:
; DATABASE ACCESSION NUMBER: NM_138973
; DATABASE ENTRY DATE: 2002-11-05
; RELEVANT RESIDUES: (1)..(5625)
US-10-721-693-21

```

Alignment of: us-10-726-967a-1 x US-10-721-693-21		..	
Alignment segment 1/1: (-)			
Quality:	35.00	Score:	350
Matching Length:	14	Total Length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		
Alignment:			
25	GIYIleArgLeuProLeuArgSerGlyLeuGlyAlaPro	38	
230	GGATCCGAGCCCGCTACATCGGCACGGCGGCGACGCT	189	
Sequence name: rmpbp2ndb:US-10-852-997-21			
Sequence documentation:			
; Sequence 21, Application US/10852997			
; Publication No. US20040220132A1			
; GENERAL INFORMATION:			
; APPLICANT: Medtronic, Inc.			
; APPLICANT: Medtronic, Inc.			
; APPLICANT: Kaemmerer, William F.			
; TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv			
; TITLE OF INVENTION: siRNA			
; FILE REFERENCE: P11089.02			
; CURRENT APPLICATION NUMBER: US/10/852,997			
; CURRENT FILING DATE: 2004-05-25			
; PRIOR APPLICATION NUMBER: 10/721,693			
; PRIOR FILING DATE: 2003-11-25			
; NUMBER OF SEQ ID NOS: 53			
; SOFTWARE: Patent in version 3.1			
; SEQ ID NO 21			
; LENGTH: 5625			
; TYPE: RNA			
; ORGANISM: Homo sapiens			
; FEATURE:			
; NAME/KEY: misc_feature			
; LOCATION: (1)..(5625)			
; OTHER INFORMATION: LOCUS BACB 5625 bp mRNA linear P			
; OTHER INFORMATION: RI 05-NOV-2002			
; OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr			
; OTHER INFORMATION: variant d, mRNA.			
; OTHER INFORMATION: accession NM_138973; VERSION NM_138973.1 GI:21040367			
; PUBLICATION INFORMATION:			
; DATABASE ACCESSION NUMBER: NM_138973			
; DATABASE ENTRY DATE: 2002-11-05			
; RELEVANT RESIDUES: (1)..(5625)			
US-10-852-997-21			
Alignment of: us-10-726-967a-1 x US-10-852-997-21			
..			
Alignment segment 1/1: (-)			
Quality:	35.00	Score:	350
Matching Length:	14	Total Length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		
Alignment:			
25	GIYIleArgLeuProLeuArgSerGlyLeuGlyAlaPro	38	
230	GGATCCGAGCCCGCTACATCGGCACGGCGGCGACGCT	189	
Sequence name: rmpbp2ndb:US-10-721-693-20			
Sequence documentation:			

```
Sequence 20, Application US/10721693
Publication No. US20040162255A1
GENERAL INFORMATION:
APPLICANT: Medtronic, Inc.
APPLICANT: Kaemmerer, William F.
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
FILE REFERENCE: P11089.00
CURRENT APPLICATION NUMBER: US/10/721,693
NUMBER OF SEQ ID NOS: 23
SOFTWARE: PatentIn version 3.1
SEQ ID NO 20
LENGTH: 5700
TYPE: RNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)..(5700)
OTHER INFORMATION: LOCUS BACE 5700 bp mRNA linear F
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
OTHER INFORMATION: ancript
OTHER INFORMATION: variant c, mRNA, NM_138971, VERSION NM_138971.1 GI:21040363
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: NM_138971.1
DATABASE ENTRY DATE: 2002-05-21
RELEVANT RESIDUES: (1)..(5700)
US-10-721-693-20
```

Alignment of: us-10-726-967a-1 x US-10-721-693-20 ..

Alignment segment 1/1: (-)

	Quality:	35.00	Score:	350
Matching length:	14		14	
Matching Percent Similarity:	64.29		57.14	
Total Percent Identity:	64.29		57.14	
Gaps:	0			

Alignment:

```
25 G1Y11eArgLeuProLeuArgSerGlyLeuG1yG1yAlaPro 38
|||||
230 GGGATCCGAGCCCGCTACATCGCACGGCGGCCAGCCT 189
```

Sequence name: rmpb2ndb:US-10-852-997-20

Sequence documentation:

```
Sequence 20, Application US/10852997
Publication No. US20040220132A1
GENERAL INFORMATION:
APPLICANT: Medtronic, Inc.
APPLICANT: Kaemmerer, William F.
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
FILE REFERENCE: P11089.02
CURRENT APPLICATION NUMBER: US/10/852,997
CURRENT FILING DATE: 2004-05-25
PRIOR FILING DATE: 2003-11-25
NUMBER OF SEQ ID NOS: 53
SOFTWARE: PatentIn version 3.1
SEQ ID NO 20
LENGTH: 5700
TYPE: RNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)..(5700)
OTHER INFORMATION: LOCUS BACE 5700 bp mRNA linear F
```

```
OTHER INFORMATION: RI 21-MAY-2002
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
OTHER INFORMATION: ancript
OTHER INFORMATION: variant c, mRNA, NM_138971, VERSION NM_138971.1 GI:21040363
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: NM_138971.1
DATABASE ENTRY DATE: 2002-05-21
RELEVANT RESIDUES: (1)..(5700)
US-10-852-997-20
```

Alignment of: us-10-726-967a-1 x US-10-852-997-20 ..

Alignment segment 1/1: (-)

	Quality:	35.00	Score:	350
Matching length:	14		14	
Matching Percent Similarity:	64.29		57.14	
Total Percent Identity:	64.29		57.14	
Gaps:	0			

Alignment:

```
25 G1Y11eArgLeuProLeuArgSerGlyLeuG1yG1yAlaPro 38
|||||
230 GGGATCCGAGCCCGCTACATCGCACGGCGGCCAGCCT 189
```

Sequence name: rmpb2ndb:US-10-721-693-19

Sequence documentation:

```
Sequence 19, Application US/10721693
Publication No. US20040162255A1
GENERAL INFORMATION:
APPLICANT: Medtronic, Inc.
APPLICANT: Kaemmerer, William F.
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
FILE REFERENCE: P11089.00
CURRENT APPLICATION NUMBER: US/10/721,693
CURRENT FILING DATE: 2003-11-25
NUMBER OF SEQ ID NOS: 23
SOFTWARE: PatentIn version 3.1
SEQ ID NO 19
LENGTH: 5757
TYPE: RNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)..(5757)
OTHER INFORMATION: LOCUS BACE 5757 bp mRNA linear P
OTHER INFORMATION: RI 05-NOV-2002
OTHER INFORMATION: DEFINITION Homo sapiens beta-site APP-cleaving enzyme (BACE), tr
OTHER INFORMATION: ancript
OTHER INFORMATION: variant b, mRNA, NM_138972, VERSION NM_138972.1 GI:21040365
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: NM_138972
DATABASE ENTRY DATE: 2002-11-05
RELEVANT RESIDUES: (1)..(5757)
US-10-721-693-19
```

Alignment of: us-10-726-967a-1 x US-10-721-693-19 ..

Alignment segment 1/1: (-)

	Quality:	35.00	Score:	350
Matching length:	14		14	
Matching Percent Similarity:	64.29		57.14	
Total Percent Identity:	64.29		57.14	
Gaps:	0			

Alignment:







TITLE OF INVENTION: NUCLEIC ACID ARRAYS FOR DETECTING GENE EXPRESSION ASSOCIATED WITH  
FILE REFERENCE: 031896-043000 (AM 101081)  
CURRENT APPLICATION NUMBER: US/10/956,157

CURRENT FILING DATE: 2004-10-04  
NUMBER OF SEQ ID NOS: 319805  
SOFTWARE: PatentIn version 3.2

SEQ ID NO 1778  
LENGTH: 5878  
TYPE: DNA  
ORGANISM: Homo sapiens

US-10-956-157-1778

Alignment of: us-10-726-967a-1 x US-10-956-157-1778 ..

Alignment segment 1/1: (-)

Quality:	35.00	Score:	351
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 GYIIEATGLeuProleuArgserGlyLeuGlyAlaPro 38  
238 GGAATCCGAGCCCTCATCGCAGCGCGCGCACCT 197

Sequence name: rnpb2ndb:US-09-917-800A-1665

Sequence documentation:

Sequence 1665, Application US/09917800A  
Patent No. US20020119462A1  
GENERAL INFORMATION:  
APPLICANT: Mendrick, Donna  
APPLICANT: Porter, Mark  
APPLICANT: Johnson, Kory  
APPLICANT: Caetle, Arthur  
APPLICANT: Elashoff, Michael  
APPLICANT: Gene Logic, Inc.  
TITLE OF INVENTION: Molecular Toxicology Modeling  
FILE REFERENCE: 44921-5038-US  
CURRENT APPLICATION NUMBER: US/09/917,800A  
CURRENT FILING DATE: 2001-07-31  
PRIOR APPLICATION NUMBER: US 60/222,040  
PRIOR FILING DATE: 2000-07-31  
PRIOR APPLICATION NUMBER: US 60/222,880  
PRIOR FILING DATE: 2000-11-02  
PRIOR APPLICATION NUMBER: US 60/290,029  
PRIOR FILING DATE: 2001-05-11  
PRIOR APPLICATION NUMBER: US 60/290,645  
PRIOR FILING DATE: 2001-05-15  
PRIOR APPLICATION NUMBER: US 60/292,336  
PRIOR FILING DATE: 2001-05-22  
PRIOR APPLICATION NUMBER: US 60/295,798  
PRIOR FILING DATE: 2001-06-06  
PRIOR APPLICATION NUMBER: US 60/297,457  
PRIOR FILING DATE: 2001-06-13  
PRIOR APPLICATION NUMBER: US 60/298,884  
PRIOR FILING DATE: 2001-06-19  
PRIOR APPLICATION NUMBER: US 60/303,459  
PRIOR FILING DATE: 2001-07-09  
NUMBER OF SEQ ID NOS: 1740  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 1665  
LENGTH: 2158  
TYPE: DNA  
ORGANISM: Rattus norvegicus  
FEATURE:  
OTHER INFORMATION: Genbank Accession No. US20020119462A1 NM\_019204  
US-09-917-800A-1665

Alignment of: us-10-726-967a-1 x US-09-917-800A-1665 ..

Alignment segment 1/1: (-)

Quality:	33.00	Score:	349
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	50.00
Total Percent Similarity:	64.29	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

23 GlnhIGLYIEATGLeuProleuArgserGlyLeuGlyGly 36  
182 CAGCGGGGAGATCGGACCTTGTGGGCTGGAGGCGCGG 141

Sequence name: rnpb2ndb:US-10-721-693-22

Sequence documentation:

Sequence 22, Application US/10721693  
Publication No. US20040162255A1  
GENERAL INFORMATION:  
APPLICANT: Medtronic, Inc.  
APPLICANT: Kaemmerer, William F.  
TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv  
FILE REFERENCE: P11089.00  
CURRENT APPLICATION NUMBER: US/10/721,693  
CURRENT FILING DATE: 2003-11-25  
NUMBER OF SEQ ID NOS: 23  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 22  
LENGTH: 3880  
TYPE: RNA  
ORGANISM: Mus musculus  
FEATURE:  
NAME/KEY: misc.feature  
LOCATION: (1)-(3880)  
OTHER INFORMATION: LOCUS Bace 3880 bp mRNA linear R  
OTHER INFORMATION: OD 07-JAN-2002  
OTHER INFORMATION: DEFINITION Mus musculus beta-site APP cleaving enzyme (Bace), mR  
OTHER INFORMATION: NA.  
OTHER INFORMATION: ACCESSION NM\_011792; VERSION NM\_011792.2 GI:6857758  
PUBLICATION INFORMATION:  
DATABASE ACCESSION NUMBER: NM\_011792  
DATABASE ENTRY DATE: 2002-01-07  
RELEVANT RESIDUES: (1)..(3880)  
US-10-721-693-22

Alignment of: us-10-726-967a-1 x US-10-721-693-22 ..

Alignment segment 1/1: (-)

Quality:	33.00	Score:	355
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	50.00
Total Percent Similarity:	64.29	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

23 GlnhIGLYIEATGLeuProleuArgserGlyLeuGlyGly 36  
182 CAGCGGGGAGATCGGACCTTGTGGGCTGGAGGCGCGG 141

Sequence name: rnpb2ndb:US-10-852-997-22

Sequence documentation:

Sequence 22, Application US/10852997  
Publication No. US20040220132A1  
GENERAL INFORMATION:  
APPLICANT: Medtronic, Inc.  
APPLICANT: Medtronic, Inc.

```

; APPLICANT: Kaemmerer, William F.
; TITLE OF INVENTION: Treatment of Neurodegenerative Disease Through Intracranial Deliv
; FILE REFERENCE: P11089.02
; CURRENT APPLICATION NUMBER: US/10/852,997
; PRIOR FILING DATE: 2004-05-25
; PRIOR APPLICATION NUMBER: 10/721,693
; NUMBER OF SEQ ID NOS: 53
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 22
; LENGTH: 3880
; TYPE: RNA
; ORGANISM: Mus musculus
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (1)..(3880)
; OTHER INFORMATION: LOCUS Bacc 3880 bp mRNA linear R
; OTHER INFORMATION: OD 07-JAN-2002
; OTHER INFORMATION: DEFINITION Mus musculus beta-61te APP cleaving enzyme (Bacc), m
; OTHER INFORMATION: NA
; PUBLICATION INFORMATION: NM_011792; VERSION NM_011792.2 GI:6857758
; DATABASE ACCESSION NUMBER: NM_011792
; DATE OF ENTRY DATE: 2002-01-07
; RELEVANT RESIDUES: (1)..(3880)
US-10-852-997-22

Alignment of: us-10-726-967a-1 x US-10-852-997-22 ..
Alignment segment 1/1: (-)

      Quality: 33.00      Bscore: 355
      Matching length: 14      Total length: 14
      Matching Percent Similarity: 64.29      Matching Percent Identity: 50.00
      Total Percent Similarity: 64.29      Total Percent Identity: 50.00
      Gaps: 0

23 GlnHsiGlyIleArgLeuProLeuArgSerGlyLeuGlyGly
182 CAGCGGGGGGATCGGGCCCTTGTGGGGCTGGAGGGCGCGG      36
                                         141

Sequence name: rmpbp2ndb:US-10-764-420-2565

Sequence documentation:
; Sequence 2565, Application US/10764420
; Publication No. US20050084872A1
; GENERAL INFORMATION:
; APPLICANT: Lum, Pek Yee
; APPLICANT: Tan, Yeejun
; APPLICANT: Dai, Hongyue
; TITLE OF INVENTION: Methods For Determining Whether An Agent
; FILE REFERENCE: ROSA12057
; CURRENT APPLICATION NUMBER: US/10/764,420
; PRIOR FILING DATE: 2004-01-23
; PRIOR APPLICATION NUMBER: US 60/442,797
; PRIOR FILING DATE: 2003-01-24
; PRIOR APPLICATION NUMBER: US 60/474,413
; PRIOR FILING DATE: 2003-05-30
; NUMBER OF SEQ ID NOS: 3683
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2565
; LENGTH: 3880
; TYPE: DNA
; ORGANISM: Mus musculus
US-10-764-420-2565

Alignment of: us-10-726-967a-1 x US-10-764-420-2565 ..
Alignment segment 1/1: (-)
```

```

      Quality: 33.00      Bscore: 355
      Matching length: 14      Total length: 14
      Matching Percent Similarity: 64.29      Matching Percent Identity: 50.00
      Total Percent Similarity: 64.29      Total Percent Identity: 50.00
      Gaps: 0

23 GlnHsiGlyIleArgLeuProLeuArgSerGlyLeuGlyGly
182 CAGCGGGGGGATCGGGCCCTTGTGGGGCTGGAGGGCGCGG      36
                                         141

Sequence name: rmpbp2ndb:US-09-794-927-50

Sequence documentation:
; Sequence 50, Application US/09794927
; Patent No. US20010016324A1
; GENERAL INFORMATION:
; APPLICANT: Guirney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Yan, Ridglang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; FILE REFERENCE: 28341/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
US-09-794-927-50

Alignment of: us-10-726-967a-1 x US-09-794-927-50 ..
Alignment segment 1/1: (-)

      Quality: 32.00      Bscore: 347
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
179 AAGCTGCCCCCTCGGGCGGGCTCTCTCGGGGCTCT      37
                                         147

Sequence name: rmpbp2ndb:US-09-795-847-50

Sequence documentation:
; Sequence 50, Application US/09795847
; Patent No. US20010018208A1
; GENERAL INFORMATION:
```





OTHER INFORMATION: delta TM  
US-09-869-414-50

Alignment of: us-10-726-967a-1 x US-09-869-414-50

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	347
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

**Alignment:**

```

27 ArgLeuProLeuArgSerGlyIleuNGlyIylala      37
:::||||| | | | | | | | | | | | | | | | | |
179 AAGTGTCCCTCCTCGGGCCGGGCTCCTCTGGGGCTCT   14

```

Sequence name: rnpbp2ndb:US-09-548-366-50

**Sequence documentation:**

Sequence 50. Application US/0934836  
Publication No. US20030104365A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: US9S THEREFOR

Alignment segment 1/1: (-)

Quality:	32.00	Score:	347
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

**Alignment:**

27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
:::|||||||:::|:::|:::  
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT 14

Sequence name: rnpbp2ndb:US-10-652-927-50

Sequence documentation:

; Sequence 50, Application US/10652927  
; Publication No. US20040043408A1  
; Journal: EPIDEMIOL. INFECT.

```

? GENERAL INFORMATION:
? APPLICANT: Guirey et al.
? TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
? TITLE OF INVENTION: Therefor
? FILE REFERENCE: 29915/6280N3
? CURRENT APPLICATION NUMBER: US/10/652,927
? CURRENT FILING DATE: 2003-08-29
? PRIOR APPLICATION NUMBER: 09/794,925
? PRIOR FILING DATE: 2001-02-27
? PRIOR APPLICATION NUMBER: 09/416,901
? PRIOR FILING DATE: 1999-10-13
? PRIOR APPLICATION NUMBER: 60/155,493
? PRIOR FILING DATE: 1999-09-23
? PRIOR APPLICATION NUMBER: 09/404,133
? PRIOR FILING DATE: 1999-09-23
? PRIOR APPLICATION NUMBER: PCT/US99/20881
? PRIOR FILING DATE: 1999-09-23
? PRIOR APPLICATION NUMBER: 60/101,594
? PRIOR FILING DATE: 1998-09-24
? NUMBER OF SEQ ID NOS: 74
? SOFTWARE: PatentIn Ver. 2.0
? SEQ ID NO 50
?
? LENGTH: 1287
?
? TYPE: DNA
? ORGANISM: Artificial sequence
? FEATURE:
? OTHER INFORMATION: Hu-Ap2(b) delta TM
? US-10-652-927-50

```

Alignment of: us-10-726-967a-1 x US-10-652-927-50

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	347
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

**Alignment:**

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
   :::::::::::::::::::::                :
179 AAGCTGCCCTCCGGCCGGGCTCCTCGGGCTCT    14
```

Sequence name: rnpbp2ndb:US-10-652-830-50

## Sequence documentation

```

1 Sequence 50 Application US/10652830
2 Publication No. US20040048303A1
3 GENERAL INFORMATION:
4 APPLICANT: Gurney et al.
5 TITLE OR INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
6 FILER OR INVENTOR: Therefor
7 FILE REFERENCE: 29915/6280N1
8 CURRENT APPLICATION NUMBER: US/10/652,830
9 CURRENT FILING DATE: 2003-08-29
10 PRIOR APPLICATION NUMBER: 09/794,925
11 PRIOR FILING DATE: 2001-02-27
12 PRIOR APPLICATION NUMBER: 09/416,901
13 PRIOR FILING DATE: 1999-10-13
14 PRIOR APPLICATION NUMBER: 60/155,493
15 PRIOR FILING DATE: 1999-09-23
16 PRIOR APPLICATION NUMBER: 09/404,133
17 PRIOR FILING DATE: 1999-09-23
18 PRIOR APPLICATION NUMBER: PCT/US99/20881
19 PRIOR FILING DATE: 1999-09-23
20 PRIOR APPLICATION NUMBER: 60/101,594
21 PRIOR FILING DATE: 1998-09-24
22 NUMBER OF SEQ ID NOS: 74
23 SOFTWARE: PatentIn Ver. 2.0

```

```
/ SEQ ID NO 50
/ LENGTH: 1287
/ TYPE: DNA
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-10-652-830-50
```

Alignment of: us-10-726-967a-1 x US-10-652-830-50 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	347
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGGCGGCTCTCTCGGGCTCT 147
```

Sequence name: rnpbp2ndb:US-10-652-045-50

Sequence documentation:

```
/ Sequence 50, Application US/10652045
/ Publication No. US20040166507A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N2
/ CURRENT APPLICATION NUMBER: US/10/652,045
/ PRIOR FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 50
/ LENGTH: 1287
/ TYPE: DNA
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-10-652-045-50
```

Alignment of: us-10-726-967a-1 x US-10-652-045-50 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	347
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGGCGGCTCTCTCGGGCTCT 147
```

Sequence name: rnpbp2ndb:US-10-476-935-50

Sequence documentation:

```
/ Sequence 50, Application US/10476935
/ Publication No. US20040234976A1
/ GENERAL INFORMATION:
/ APPLICANT: Beinkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M1
/ CURRENT APPLICATION NUMBER: US/10/476,935
/ PRIOR FILING DATE: 2003-11-06
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 50
/ LENGTH: 1287
/ TYPE: DNA
/ ORGANISM: Artificial sequence
/ FEATURE:
/ OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
US-10-476-935-50
```

Alignment of: us-10-726-967a-1 x US-10-476-935-50 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	347
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGGCGGCTCTCTCGGGCTCT 147
```

Sequence name: rnpbp2ndb:US-10-477-076-50

Sequence documentation:

```
/ Sequence 50, Application US/10477076
/ Publication No. US20050080232A1
/ GENERAL INFORMATION:
/ APPLICANT: Beinkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M2
/ CURRENT APPLICATION NUMBER: US/10/477,076
/ PRIOR FILING DATE: 2003-11-06
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
```





```
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 25
/ LENGTH: 1302
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-794-743-25
```

Alignment of: us-10-726-967a-1 x US-09-794-743-25 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Escore:	348
Matching length:	11		Total length:	11
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55
Total Percent Similarity:	81.82		Total Percent Identity:	54.55
Gaps:	0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||::|::|::|::|::|::|::|::|::|
119 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT
```

Sequence name: rnpbp2ndb:US-09-794-748-25

37  
87

Sequence documentation:

```
/ Sequence 25, Application US/09794748
/ Patent No. US20020037315A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
/ TITLE OF INVENTION: USES
/ FILE REFERENCE: 28341/62801I.
/ CURRENT APPLICATION NUMBER: US/09/794,748
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 25
/ LENGTH: 1302
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-794-748-25
```

Alignment of: us-10-726-967a-1 x US-09-794-748-25 ..

Alignment segment 1/1: (-)

Quality: 32.00

Escore: 348

	Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55
Total Percent Similarity:	81.82		Total Percent Identity:	54.55
Gaps:	0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||::|::|::|::|::|::|::|::|::|
119 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT
```

37  
87

Sequence name: rnpbp2ndb:US-09-794-925-25

Sequence documentation:

```
/ Sequence 25, Application US/09794925
/ Patent No. US20020064819A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 28341/62801I
/ CURRENT APPLICATION NUMBER: US/09/794,925
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 25
/ LENGTH: 1302
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-794-925-25
```

Alignment of: us-10-726-967a-1 x US-09-794-925-25 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Escore:	348
Matching length:	11		Total length:	11
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55
Total Percent Similarity:	81.82		Total Percent Identity:	54.55
Gaps:	0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||::|::|::|::|::|::|::|::|::|
119 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT
```

37  
87

Sequence name: rnpbp2ndb:US-09-681-442-25

Sequence documentation:

```
/ Sequence 25, Application US/09681442
/ Patent No. US20020081634A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
```

TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/62808C  
CURRENT APPLICATION NUMBER: US/09/681,442  
CURRENT FILING DATE: 2001-04-05  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-681-442-25

Alignment of: us-10-726-967a-1 x US-09-681-442-25 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching Length:	11		Total Length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||:::|||||:::|||||  
119 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 87

Sequence name: rnpb2ndb:US-09-869-414-25

Sequence documentation:

Sequence 25, Application US/09869414  
Publication No. US2003007226A1  
GENERAL INFORMATION:  
APPLICANT: Belinkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M  
CURRENT APPLICATION NUMBER: US/09/869,414  
CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-869-414-25

Alignment of: us-10-726-967a-1 x US-09-869-414-25 ..

Alignment segment 1/1: (-)

Quality: 32.00

Score: 348

	Matching length:	11		Total length:	11
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||:::|||||:::|||||  
119 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 87

Sequence name: rnpb2ndb:US-09-548-366-25

Sequence documentation:

Sequence 25, Application US/09548366  
Publication No. US20030104365A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Blenkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280A  
CURRENT APPLICATION NUMBER: US/09/548,366  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 65  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-366-25

Alignment of: us-10-726-967a-1 x US-09-548-366-25 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching Length:	11		Total Length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||:::|||||:::|||||  
119 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 87

Sequence name: rnpb2ndb:US-10-652-927-25

Sequence documentation:

Sequence 25, Application US/10652927  
Publication No. US20040043408A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 29915/6280N3  
CURRENT APPLICATION NUMBER: US/10/652,927  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27

```
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 25
/ LENGTH: 1302
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-10-652-927-25
```

Alignment of: us-10-726-967a-1 x US-10-652-927-25 ..

Alignment segment 1/1: (-)

Quality:	32.00	Bscore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
119 AAGCTGCCCTCCGCGCGGCTCCTCGGCGCTCT 87
```

Sequence name: rnpbp2ndb:US-10-652-830-25

Sequence documentation:

```
/ Sequence 25, Application US/10652830
/ Publication No. US20040048303A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N1
/ CURRENT APPLICATION NUMBER: US/10/652,830
/ PRIOR FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 25
/ LENGTH: 1302
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-10-652-830-25
```

Alignment of: us-10-726-967a-1 x US-10-652-830-25 ..

Alignment segment 1/1: (-)

Quality:	32.00	Bscore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55

Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
119 AAGCTGCCCTCCGCGCGGCTCCTCGGCGCTCT 87
```

Sequence name: rnpbp2ndb:US-10-652-045-25

Sequence documentation:

```
/ Sequence 25, Application US/10652045
/ Publication No. US20040166507A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280N2
/ CURRENT APPLICATION NUMBER: US/10/652,045
/ PRIOR FILING DATE: 2003-08-29
/ PRIOR APPLICATION NUMBER: 09/794,925
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 25
/ LENGTH: 1302
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-10-652-045-25
```

Alignment of: us-10-726-967a-1 x US-10-652-045-25 ..

Alignment segment 1/1: (-)

Quality:	32.00	Bscore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
119 AAGCTGCCCTCCGCGCGGCTCCTCGGCGCTCT 87
```

Sequence name: rnpbp2ndb:US-10-476-935-25

Sequence documentation:

```
/ Sequence 25, Application US/10476935
/ Publication No. US20040234976A1
/ GENERAL INFORMATION:
/ APPLICANT: Beinkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M1
/ CURRENT APPLICATION NUMBER: US/10/476,935
/ PRIOR FILING DATE: 2003-11-06
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
```



;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 52  
;; LENGTH: 1305  
;; TYPE: DNA  
;; ORGANISM: Artificial Sequence  
;; FEATURE:  
;; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)  
US-09-794-927-52

Alignment of: us-10-726-967a-1 x US-09-794-927-52 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGTCGCCCTCCGCGCGGCTCTCGGCTCT

37  
147

Sequence name: rnpbp2ndb:US-09-795-847-52

Sequence documentation:

;; Sequence 52, Application US/09795847  
;; Patent No. US20010018208A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Gurney, Mark E.  
;; APPLICANT: Bienkowski, Michael J.  
;; APPLICANT: Heinrichson, Robert L.  
;; APPLICANT: Parodi, Luis A.  
;; APPLICANT: Van, Ridiang  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
;; TITLE OF INVENTION: USES  
;; TITLE OF INVENTION: THEREFOR  
;; FILE REFERENCE: 28341/6280BC  
;; CURRENT APPLICATION NUMBER: US/09/795,847  
;; CURRENT FILING DATE: 2001-02-28  
;; PRIOR APPLICATION NUMBER: 09/416,901  
;; PRIOR FILING DATE: 1999-10-13  
;; PRIOR APPLICATION NUMBER: 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 52  
;; LENGTH: 1305  
;; TYPE: DNA  
;; ORGANISM: Artificial Sequence  
;; FEATURE:  
;; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)  
US-09-795-847-52

Alignment of: us-10-726-967a-1 x US-09-795-847-52 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55

Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGTCGCCCTCCGCGCGGCTCTCGGCTCT

37  
147

Sequence name: rnpbp2ndb:US-09-794-743-52

Sequence documentation:

;; Sequence 52, Application US/09794743  
;; Patent No. US20010021391A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Gurney, Mark E.  
;; APPLICANT: Bienkowski, Michael J.  
;; APPLICANT: Heinrichson, Robert L.  
;; APPLICANT: Parodi, Luis A.  
;; APPLICANT: Van, Ridiang  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
;; TITLE OF INVENTION: USES  
;; TITLE OF INVENTION: THEREFOR  
;; FILE REFERENCE: 28341/6280BC  
;; CURRENT APPLICATION NUMBER: US/09/794,743  
;; CURRENT FILING DATE: 2001-02-27  
;; PRIOR APPLICATION NUMBER: 09/416,901  
;; PRIOR FILING DATE: 1999-10-13  
;; PRIOR APPLICATION NUMBER: 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 52  
;; LENGTH: 1305  
;; TYPE: DNA  
;; ORGANISM: Artificial Sequence  
;; FEATURE:  
;; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)  
US-09-794-743-52

Alignment of: us-10-726-967a-1 x US-09-794-743-52 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGTCGCCCTCCGCGCGGCTCTCGGCTCT

37  
147

Sequence name: rnpbp2ndb:US-09-794-748-52

Sequence documentation:

;; Sequence 52, Application US/09794748  
;; Patent No. US20020037315A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Gurney, Mark E.  
;; APPLICANT: Bienkowski, Michael J.  
;; APPLICANT: Heinrichson, Robert L.  
;; APPLICANT: Parodi, Luis A.



27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||:::  
179 AAGCTGCCCCCTCCGCGGCTCTCGGCTCT

37  
147

Sequence name: rnpb2ndb:US-09-869-414-52

Sequence documentation:  
; Sequence 52, Application US/09869414  
; Publication No. US2003077226A1  
; GENERAL INFORMATION:

; APPLICANT: Bienkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M  
; CURRENT APPLICATION NUMBER: US/09/869,414  
; PRIOR FILING DATE: 2001-06-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 52  
; LENGTH: 1305  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)  
; US-09-869-414-52

Alignment of: us-10-726-967a-1 x US-09-869-414-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||:::  
179 AAGCTGCCCCCTCCGCGGCTCTCGGCTCT

37  
147

Sequence name: rnpb2ndb:US-09-548-366-52

Sequence documentation:

; Sequence 52, Application US/09548366  
; Publication No. US20030104365A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Van, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
; FILE REFERENCE: 28341/6280A  
; CURRENT APPLICATION NUMBER: US/09/548,366  
; PRIOR FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 52  
; LENGTH: 1305  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)  
; US-09-548-366-52

Alignment of: us-10-726-967a-1 x US-09-548-366-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||:::  
179 AAGCTGCCCCCTCCGCGGCTCTCGGCTCT

37  
147

Sequence name: rnpb2ndb:US-10-652-927-52

Sequence documentation:

; Sequence 52, Application US/10652927  
; Publication No. US20040043408A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280N3  
; CURRENT APPLICATION NUMBER: US/10/652,927  
; PRIOR FILING DATE: 2003-08-29  
; PRIOR APPLICATION NUMBER: 09/794,925  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 52  
; LENGTH: 1305  
; TYPE: DNA  
; ORGANISM: Artificial sequence  
; FEATURE:  
; OTHER INFORMATION: Hu-Asp2(b) delta TM  
; US-10-652-927-52

Alignment of: us-10-726-967a-1 x US-10-652-927-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	



Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37  
147

Sequence name: rnpb2ndb:US-10-652-830-52

Sequence documentation:

; Sequence 52, Application US/10652830  
; Publication No. US20040048303A1  
; GENERAL INFORMATION:

; APPLICANT: Gurney et al.

; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

; FILE REFERENCE: 29915/6280N1

; CURRENT APPLICATION NUMBER: US/10/652,830

; PRIOR FILING DATE: 2003-08-29

; PRIOR APPLICATION NUMBER: 09/794,925

; PRIOR FILING DATE: 2001-02-27

; PRIOR APPLICATION NUMBER: 09/416,901

; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; NUMBER OF SEQ ID NOS: 74

; SOFTWARE: Patentin Ver. 2.0

; SEQ ID NO 52

; LENGTH: 1305

; TYPE: DNA

; ORGANISM: Artificial sequence

; FEATURE: OTHER INFORMATION: Hu-Asp2(b) delta TM

; US-10-652-830-52

Alignment of: us-10-726-967a-1 x US-10-652-830-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37  
147

Sequence name: rnpb2ndb:US-10-652-045-52

Sequence documentation:

; Sequence 52, Application US/10652045  
; Publication No. US20040166507A1  
; GENERAL INFORMATION:

; APPLICANT: Gurney et al.

; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

; FILE REFERENCE: 29915/6280N2

; CURRENT APPLICATION NUMBER: US/10/652,045

; PRIOR FILING DATE: 2003-08-29

; PRIOR APPLICATION NUMBER: 09/794,925

; PRIOR FILING DATE: 2001-02-27

; PRIOR APPLICATION NUMBER: 09/416,901

; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 74

; SOFTWARE: Patentin Ver. 2.0

; SEQ ID NO 52

; LENGTH: 1305

; TYPE: DNA

; ORGANISM: Artificial sequence

; FEATURE: OTHER INFORMATION: Hu-Asp2(b) delta TM

; US-10-652-045-52

Alignment of: us-10-726-967a-1 x US-10-652-045-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37  
147

Sequence name: rnpb2ndb:US-10-476-935-52

Sequence documentation:

; Sequence 52, Application US/10476935  
; Publication No. US20040234976A1  
; GENERAL INFORMATION:

; APPLICANT: Beninkowski et al.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

; FILE REFERENCE: 28341/6280M1

; CURRENT APPLICATION NUMBER: US/10/476,935

; PRIOR FILING DATE: 2003-11-06

; PRIOR APPLICATION NUMBER: 09/416,901

; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: Patentin Ver. 2.0

; SEQ ID NO 52

; LENGTH: 1305

; TYPE: DNA

; ORGANISM: Artificial Sequence

; FEATURE: OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2(b)

; US-10-476-935-52

Alignment of: us-10-726-967a-1 x US-10-476-935-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Matching length: 11 Total length: 11  
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
Gaps: 0

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|:::|:::  
179 AAGCTGCCCTCCGGCGGCTCTCTCGGCTCT 147

Sequence name: rnpb2ndb:US-10-477-076-52

## Sequence documentation:

Sequence 52, Application US/10477076  
Publication No. US2005008032A1  
GENERAL INFORMATION:  
APPLICANT: Beinowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M2  
CURRENT APPLICATION NUMBER: US/10/477,076  
CURRENT FILING DATE: 2003-11-06  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 52  
LENGTH: 1305  
TYPE: DNA  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Hu-App2(b)  
US-10-477-076-52

Alignment of: us-10-726-967a-1 x US-10-477-076-52 ..

## Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|:::|:::  
179 AAGCTGCCCTCCGGCGGCTCTCTCGGCTCT 147

Sequence name: rnpb2ndb:US-09-794-927-21

## Sequence documentation:

Sequence 21, Application US/09794927  
Patent No. US20010016324A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES

TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/6280FG  
CURRENT APPLICATION NUMBER: US/09/794,927  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 21  
LENGTH: 1341  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-927-21

Alignment of: us-10-726-967a-1 x US-09-794-927-21 ..

## Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|:::|:::  
158 AAGCTGCCCTCCGGCGGCTCTCTCGGCTCT 126

Sequence name: rnpb2ndb:US-09-795-847-21

## Sequence documentation:

Sequence 21, Application US/09795847  
Patent No. US20010018208A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280FG  
CURRENT APPLICATION NUMBER: US/09/795,847  
CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 21  
LENGTH: 1341  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-795-847-21

Alignment of: us-10-726-967a-1 x US-09-795-847-21 ..  
Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
158 AAGTCGCCCCCTCCGCGCGGCTCTCGGCTCTC  
37  
126

Sequence name: rnpb2ndb:US-09-794-743-21

Sequence documentation:  
; Sequence 21, Application US/09794743  
; Patent No. US20010021391A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
; TITLE OF INVENTION: USES  
; FILE REFERENCE: 28341/6280BC  
; CURRENT APPLICATION NUMBER: US/09/794,743  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 21  
; LENGTH: 1341  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-794-743-21

Alignment of: us-10-726-967a-1 x US-09-794-743-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
158 AAGTCGCCCCCTCCGCGCGGCTCTCGGCTCTC  
37  
126

Sequence name: rnpb2ndb:US-09-794-748-21

Sequence documentation:  
; Sequence 21, Application US/09794748  
; Patent No. US20020037315A1  
; GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
; TITLE OF INVENTION: USES  
; FILE REFERENCE: 28341/6280BL  
; CURRENT APPLICATION NUMBER: US/09/794,748  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 21  
; LENGTH: 1341  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-794-748-21

Alignment of: us-10-726-967a-1 x US-09-794-748-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
158 AAGTCGCCCCCTCCGCGCGGCTCTCGGCTCTC  
37  
126

Sequence name: rnpb2ndb:US-09-794-925-21

Sequence documentation:  
; Sequence 21, Application US/09794925  
; Patent No. US20020064819A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/6280H1  
; CURRENT APPLICATION NUMBER: US/09/794,925  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0

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; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-925-21
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Alignment of: us-10-726-967a-1 x US-09-794-925-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||
158 AAGCTGCCCTCCGCCGCGCTCTCGGCTCT
```

37  
126

Sequence name: rnpb2ndb:US-09-681-442-21

Sequence documentation:

```

; Sequence 21, Application US/09681442
; Patent No. US20020081634A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OR INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280Fg
; CURRENT APPLICATION NUMBER: US/09/681,442
; CURRENT FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-681-442-21
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Alignment of: us-10-726-967a-1 x US-09-681-442-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||
158 AAGCTGCCCTCCGCCGCGCTCTCGGCTCT
```

37  
126

Sequence name: rnpb2ndb:US-09-869-414-21

Sequence documentation:

```

; Sequence 21, Application US/0969414
; Publication No. US20030077226A1
; GENERAL INFORMATION:
; APPLICANT: Bienkowski, et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OR INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-869-414-21
```

Alignment of: us-10-726-967a-1 x US-09-869-414-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|||||:::|||||
158 AAGCTGCCCTCCGCCGCGCTCTCGGCTCT
```

37  
126

Sequence name: rnpb2ndb:US-09-548-366-21

Sequence documentation:

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; Sequence 21, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OR INVENTION: USES THEREFOR
; FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 21
; LENGTH: 1341
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TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-366-21

Alignment of: us-10-726-967a-1 x US-09-548-366-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
158 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37  
126

Sequence name: rnpb2ndb:US-10-652-927-21

Sequence documentation:

Sequence 21, Application US/10652927  
Publication No. US20040043408A1  
GENERAL INFORMATION:

APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N3  
CURRENT APPLICATION NUMBER: US/10/652,927  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 21  
LENGTH: 1341  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-652-927-21

Alignment of: us-10-726-967a-1 x US-10-652-927-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
158 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37  
126

Sequence name: rnpb2ndb:US-10-652-830-21

Sequence documentation:

Sequence 21, Application US/10652830  
Publication No. US20040046303A1

GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N1  
CURRENT APPLICATION NUMBER: US/10/652,830  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 21  
LENGTH: 1341  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-652-830-21

Alignment of: us-10-726-967a-1 x US-10-652-830-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
158 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37  
126

Sequence name: rnpb2ndb:US-10-652-045-21

Sequence documentation:

Sequence 21, Application US/10652045  
Publication No. US20040165507A1  
GENERAL INFORMATION:

APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N2  
CURRENT APPLICATION NUMBER: US/10/652,045  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 21  
LENGTH: 1341  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-652-045-21

US-10-652-045-21

Alignment of: us-10-726-967a-1 x US-10-652-045-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
158 AAGCTGCCCCCTCCGCGCGGCTCTCTCGGCTCT

37  
126

Sequence name: rnpb2ndb:US-10-476-935-21

Sequence documentation:

Publication No. US20040234976A1  
GENERAL INFORMATION:  
APPLICANT: Beinkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M1  
CURRENT APPLICATION NUMBER: US/10/476,935  
CURRENT FILING DATE: 2003-11-06  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 21  
LENGTH: 1341  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-476-935-21

Alignment of: us-10-726-967a-1 x US-10-476-935-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
158 AAGCTGCCCCCTCCGCGCGGCTCTCTCGGCTCT

37  
126

Sequence name: rnpb2ndb:US-10-940-867-21

Sequence documentation:

Sequence 21, Application US/10940867  
Publication No. US20050026256A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Van, Riqiang

APPLICANT: Pharmacia &amp; Upjohn Company

TITLE OF INVENTION: Alzheimer's Disease Secretase

FILE REFERENCE: 6177.PCPA

CURRENT APPLICATION NUMBER: US/10/940,867

CURRENT FILING DATE: 2004-09-14

PRIOR APPLICATION NUMBER: US 09/806,194

PRIOR FILING DATE: 2001-03-26

PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 49

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 21

LENGTH: 1341

TYPE: DNA

ORGANISM: Homo sapiens

US-10-940-867-21

Alignment of: us-10-726-967a-1 x US-10-940-867-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
158 AAGCTGCCCCCTCCGCGCGGCTCTCTCGGCTCT

37  
126

Sequence name: rnpb2ndb:US-10-477-076-21

Sequence documentation:

Publication No. US20050080232A1  
GENERAL INFORMATION:  
APPLICANT: Beinkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M2  
CURRENT APPLICATION NUMBER: US/10/477,076  
CURRENT FILING DATE: 2003-11-06  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 21  
LENGTH: 1341  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-477-076-21

Alignment of: us-10-726-967a-1 x US-10-477-076-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Gaps: 0

Alignment:

27 ArgleuProleuArgserGlyleuGlyAla  
:::|||||:::|  
158 AGCTGCCCCCTCCGGCGGCTCTCGGCTCT

37  
126

Sequence name: rnpb2ndb:US-09-794-927-29

Sequence documentation:

Sequence 29, Application US/09794927  
Patent No. US20010016324A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280FG  
CURRENT FILING DATE: 2001-02-27  
CURRENT APPLICATION NUMBER: US/09/794,927  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 29  
LENGTH: 1362  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-927-29

Alignment of: us-10-726-967a-1 x US-09-794-927-29 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	

Alignment:

27 ArgleuProleuArgserGlyleuGlyAla  
:::|||||:::|  
179 AGCTGCCCCCTCCGGCGGCTCTCGGCTCT

37  
147

Sequence name: rnpb2ndb:US-09-795-847-29

Sequence documentation:

Sequence 29, Application US/09795847  
Patent No. US20010018208A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
TITLE OF INVENTION: THEREFOR

FILE REFERENCE: 28341/6280DE

CURRENT APPLICATION NUMBER: US/09/795,847  
CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 29  
LENGTH: 1362  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-795-847-29

Alignment of: us-10-726-967a-1 x US-09-795-847-29 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	348
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	

Alignment:

27 ArgleuProleuArgserGlyleuGlyAla  
:::|||||:::|  
179 AGCTGCCCCCTCCGGCGGCTCTCGGCTCT

37  
147

Sequence name: rnpb2ndb:US-09-794-743-29

Sequence documentation:

Sequence 29, Application US/09794743  
Patent No. US20010021391A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280BC  
CURRENT FILING DATE: 2001-02-27  
CURRENT APPLICATION NUMBER: US/09/794,743  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 29  
LENGTH: 1362  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-743-29

Alignment of: us-10-726-967a-1 x US-09-794-743-29 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 147
```

Sequence name: rnpbp2ndb:US-09-794-748-29

Sequence documentation:

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/ Sequence 29, Application US/09794748
/ Patent No. US20020037315A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
/ TITLE OF INVENTION: USES
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 28341/6280JL
/ CURRENT APPLICATION NUMBER: US/09/794,748
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 29
/ LENGTH: 1362
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-794-748-29
```

Alignment of: us-10-726-967a-1 x US-09-794-748-29 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 147
```

Sequence name: rnpbp2ndb:US-09-794-925-29

Sequence documentation:

```
/ Sequence 29, Application US/09794925
/ Patent No. US20020064819A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
```

```
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
```

```
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 28341/6280JL
/ CURRENT APPLICATION NUMBER: US/09/794,925
```

```
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 29
/ LENGTH: 1362
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-794-925-29
```

Alignment of: us-10-726-967a-1 x US-09-794-925-29 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 147
```

Sequence name: rnpbp2ndb:US-09-681-442-29

Sequence documentation:

```
/ Sequence 29, Application US/09681442
/ Patent No. US20020081634A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 28341/6280JL
/ CURRENT APPLICATION NUMBER: US/09/681,442
/ CURRENT FILING DATE: 2001-04-05
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 29
/ LENGTH: 1362
```



```

; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-681-442-29

```

Alignment of: us-10-726-967a-1 x US-09-681-442-29  
Alignment segment 1/1: (-)

Quality:	32.00	Escape:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeugLygIyAla  
:::|||||::|::|:  
179 AAGCTGCCCCCTCCGGCGGGACTTCCTGGGCTCT
```

Sequence name: rnpbp2rnb;US-09-066-414-29

```

Sequence documentation:
; Sequence 29, Application US/09869414
; Publication No. US20030077226A1
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OR INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES THEREOF

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Alignment of: us-10-728-967a-1 x US-09-869-414-29 .  
Alignment segment 1/1: (-)

Quality:	32.00	Escape:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyValAla
   ::|||:|||::|||::|||::|||::|||
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGACTCT
```

```
Sequence documentation:
; Sequence 29, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
```

?  
 ? APPLICANT: Bienkowski, Michael J.  
 ? APPLICANT: Heinrichson, Robert L.  
 ? APPLICANT: Parodi, Luis A.  
 ? APPLICANT: Yan, Riqiang  
 ? TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
 ? TITLE OF INVENTION: USES THEREOF  
 ? FILE REFERENCE: 26341/6280A US 00/5749 366

Alignment of: us-10-726-967a-1 x US-09-548-366-29 .  
Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyIcylVala
   ::||| ||||| ||| ||| ::||| ::
179 AAGCTGCCCTCCGACCGGAGCTCCTCGAGCTCT
```

```

Sequence documentation:
; Sequence 29, Application US/10652927
; Publication NO. US20040043408A1
; GENERAL INFORMATION:
; APPLICANT: Guirey et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, App Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N3
; CURRENT APPLICATION NUMBER: US/10/652,927
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-927-29

```

Alignment of: us-10-726-967a-1 x US-10-652-927-29 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGCTCT 147
```

Sequence name: rnpb2ndb:US-10-652-830-29

Sequence documentation:

```
; Sequence 29, Application US/10652830
; Publication No. US20040048303a1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-830-29
```

Alignment of: us-10-726-967a-1 x US-10-652-830-29 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGCTCT 147
```

Sequence name: rnpb2ndb:US-10-652-045-29

Sequence documentation:

```
; Sequence 29, Application US/10652045
; Publication No. US20040165507a1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; TITLE OF INVENTION: Therefor
```

```
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-045-29
```

Alignment of: us-10-726-967a-1 x US-10-652-045-29 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGCTCT 147
```

Sequence name: rnpb2ndb:US-10-476-935-29

Sequence documentation:

```
; Sequence 29, Application US/10476935
; Publication No. US20040234976a1
; GENERAL INFORMATION:
; APPLICANT: Beinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-476-935-29
```

Alignment of: us-10-726-967a-1 x US-10-476-935-29 ..

Alignment segment 1/1: (-)



Sequence documentation:  
; Sequence 7, Application US/10281092  
; Publication No. US20040121947A1  
; GENERAL INFORMATION:  
; APPLICANT: Ghosh, Arun K.  
; APPLICANT: Tang, Jordan J.N.  
; APPLICANT: Bilcer, Geoffrey  
; APPLICANT: Chang, Manpin  
; APPLICANT: Hong, Lin  
; APPLICANT: Koelsch, Gerald E.  
; APPLICANT: Loy, Jeffrey A.  
; APPLICANT: Turner, Robert T., III  
; APPLICANT: Devasudrum, Thippeswamy  
; TITLE OF INVENTION: COMPOUNDS WHICH INHIBIT BETA-SECRETASE  
; TITLE OF INVENTION: ACTIVITY AND METHODS OF USE THEREOF  
; FILE REFERENCE: 2932.1001-004  
; CURRENT FILING DATE: US/10/281,092  
; PRIOR APPLICATION NUMBER: US 10/032,818  
; PRIOR FILING DATE: 2001-12-28  
; PRIOR APPLICATION NUMBER: PCT US01/50826  
; PRIOR FILING DATE: 2001-12-28  
; PRIOR APPLICATION NUMBER: US 60/258,705  
; PRIOR FILING DATE: 2000-12-28  
; PRIOR APPLICATION NUMBER: US 60/275,756  
; PRIOR FILING DATE: 2001-03-14  
; PRIOR APPLICATION NUMBER: US 60/335,952  
; PRIOR FILING DATE: 2001-10-23  
; PRIOR APPLICATION NUMBER: US 60/333,545  
; PRIOR FILING DATE: 2001-11-27  
; PRIOR APPLICATION NUMBER: US 60/348,464  
; PRIOR FILING DATE: 2002-01-14  
; PRIOR APPLICATION NUMBER: US 60/348,615  
; PRIOR FILING DATE: 2002-01-14  
; PRIOR APPLICATION NUMBER: US 60/390,804  
; PRIOR FILING DATE: 2002-06-20  
; PRIOR APPLICATION NUMBER: US 60/397,557  
; PRIOR FILING DATE: 2002-07-19  
; Remaining Prior Application data removed - See File Wrapper or PALM.  
; NUMBER OF SEQ ID NOS: 59  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 7  
; LENGTH: 1371  
; TYPE: DNA  
; ORGANISM: Unknown  
; FEATURE:  
; OTHER INFORMATION: promemapsin 2-r1  
US-10-281-092-7

Alignment of: us-10-726-967a-1 x US-10-281-092-7 ..

Alignment segment 1/1: (-)

	Quality:	Score:
Matching length:	32.00	348
Matching Percent Similarity:	81.82	11
Total Percent Similarity:	81.82	54.55
Total Percent Identity:		54.55

Gaps: 0

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla 37

185 AAGCTGCGCCCTCCGCGCGGCTCTCCGCGGCTCT 153

Sequence name: rnpbp2nrb:US-09-794-927-23

Sequence documentation:  
; Sequence 23, Application US/09794927  
; Patent No. US20010016324A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
; TITLE OF INVENTION: USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/6280FG  
; CURRENT APPLICATION NUMBER: US/09/794,927  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
US-09-794-927-23

Alignment of: us-10-726-967a-1 x US-09-794-927-23 ..

Alignment segment 1/1: (-)

	Quality:	Score:
Matching length:	32.00	348
Matching Percent Similarity:	81.82	11
Total Percent Similarity:	81.82	54.55
Total Percent Identity:		54.55

Gaps: 0

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla 37

197 AAGCTGCGCCCTCCGCGCGGCTCTCCGCGGCTCT 165

Sequence name: rnpbp2nrb:US-09-794-927-31

Sequence documentation:  
; Sequence 31, Application US/09794927  
; Patent No. US20010016324A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
; TITLE OF INVENTION: USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/6280FG  
; CURRENT APPLICATION NUMBER: US/09/794,927  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 31  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-927-31

Alignment of: us-10-726-967a-1 x US-09-794-927-31 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyIYAla  
179 AGCTGCCCCCTCCGGCCGGCTCTCGGCTCT

37  
147

Sequence name: rnpb2ndb:US-09-795-847-23

Sequence documentation:

Sequence 23, Application US/09795847  
Patent No. US20010018208A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280DE  
CURRENT APPLICATION NUMBER: US/09/795,847  
CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 23  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-795-847-23

Alignment of: us-10-726-967a-1 x US-09-795-847-23 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyIYAla  
197 AGCTGCCCCCTCCGGCCGGCTCTCGGCTCT

37  
165

Sequence name: rnpb2ndb:US-09-795-847-31

Sequence documentation:

Sequence 31, Application US/09795847  
Patent No. US20010018208A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280DE  
CURRENT APPLICATION NUMBER: US/09/795,847  
CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 31  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-795-847-31

Alignment of: us-10-726-967a-1 x US-09-795-847-31 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyIYAla  
179 AGCTGCCCCCTCCGGCCGGCTCTCGGCTCT

37  
147

Sequence name: rnpb2ndb:US-09-794-743-23

Sequence documentation:

Sequence 23, Application US/09794743  
Patent No. US20010021391A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280BC  
CURRENT APPLICATION NUMBER: US/09/794,743  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133

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; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-743-23

Alignment of: us-10-726-967a-1 x US-09-794-743-23 ..

Alignment segment 1/1: (-)

      Quality: 32.00      Escore: 348
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSergIyLeuGIyGIyAla
:::|||||:::|||||:::|||||:::
197 AAGCTGCCCCCTCCGGCGGCGCTCCTCGGCGCTCT

Sequence name: rnpbp2ndb:US-09-794-743-31

Sequence documentation:
; Sequence 31, Application US/09794743
; Patent No. US20010021391A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280BC
; CURRENT APPLICATION NUMBER: US/09/794,743
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-743-31

Alignment of: us-10-726-967a-1 x US-09-794-743-31 ..

Alignment segment 1/1: (-)

      Quality: 32.00      Escore: 348
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
Total Percent Similarity: 81.82      Total Percent Identity: 54.55
Gaps: 0
```

```

Alignment:
27 ArgLeuProLeuArgSergIyLeuGIyGIyAla
:::|||||:::|||||:::|||||:::
179 AAGCTGCCCCCTCCGGCGGCGCTCCTCGGCGCTCT

Sequence name: rnpbp2ndb:US-09-794-748-23

Sequence documentation:
; Sequence 23, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280JL
; CURRENT APPLICATION NUMBER: US/09/794,748
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-748-23

Alignment of: us-10-726-967a-1 x US-09-794-748-23 ..

Alignment segment 1/1: (-)

      Quality: 32.00      Escore: 348
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSergIyLeuGIyGIyAla
:::|||||:::|||||:::|||||:::
197 AAGCTGCCCCCTCCGGCGGCGCTCCTCGGCGCTCT

Sequence name: rnpbp2ndb:US-09-794-748-31

Sequence documentation:
; Sequence 31, Application US/09794748
; Patent No. US20020037315A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; TITLE OF INVENTION: USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280JL
```

CURRENT APPLICATION NUMBER: US/09/794,748  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 31  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-748-31

Alignment of: us-10-726-967a-1 x US-09-794-748-31 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	348
Matching length:	11	Total length:	11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
Gaps:	0			

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|||||  
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT

37  
147

Sequence name: rnbp2ndb:US-09-794-925-23

Sequence documentation:

Sequence 23, Application US/09794925  
Patent No. US20020064819A1  
GENERAL INFORMATION:  
APPLICANT: Guiney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 26341/6280H1  
CURRENT APPLICATION NUMBER: US/09/794,925  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 23  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-925-23

Alignment of: us-10-726-967a-1 x US-09-794-925-23 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	348
Matching length:	11	Total length:	11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
Gaps:	0			

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|||||  
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT

37  
165

Sequence name: rnbp2ndb:US-09-794-925-31

Sequence documentation:

Sequence 31, Application US/09794925  
Patent No. US20020064819A1  
GENERAL INFORMATION:  
APPLICANT: Guiney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 26341/6280H1  
CURRENT APPLICATION NUMBER: US/09/794,925  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 31  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-925-31

Alignment of: us-10-726-967a-1 x US-09-794-925-31 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	348
Matching length:	11	Total length:	11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
Gaps:	0			

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|||||  
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT

37  
147

Sequence name: rnbp2ndb:US-09-681-442-23

Sequence documentation:

Sequence 23, Application US/09681442  
Patent No. US20020081634A1  
GENERAL INFORMATION:  
APPLICANT: Guiney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.

US-09-681-442-31

FILE REFERENCE: 28341/6

FILE REFERENCE: 28341/6



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; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-869-414-31
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Alignment of: us-10-726-967a-1 x US-09-869-414-31 ..

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Alignment segment 1/1: (-)
Quality: 32.00
Matching length: 11
Matching Percent Similarity: 81.82
Total Percent Identity: 54.55
Total Percent Similarity: 81.82
Gaps: 0
```

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::|
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT
```

37  
147

Sequence name: rmpb2ndb:US-09-548-366-23

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Sequence documentation:
; Sequence 23, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-366-23
```

Alignment of: us-10-726-967a-1 x US-09-548-366-23 ..

Alignment segment 1/1: (-)

Quality: 32.00

Escore: 348

```

Matching length: 11
Matching Percent Similarity: 81.82
Total Percent Identity: 54.55
Total Percent Similarity: 81.82
Gaps: 0
```

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::|
197 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT
```

37  
165

Sequence name: rmpb2ndb:US-09-548-366-31

```

Sequence documentation:
; Sequence 31, Application US/09548366
; Publication No. US20030104365A1
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
; FILE REFERENCE: 28341/6280A
; CURRENT APPLICATION NUMBER: US/09/548,366
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-366-31
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Alignment of: us-10-726-967a-1 x US-09-548-366-31 ..

Alignment segment 1/1: (-)

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Quality: 32.00
Matching length: 11
Matching Percent Similarity: 81.82
Total Percent Identity: 54.55
Total Percent Similarity: 81.82
Gaps: 0
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Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::|
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT
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37  
147

Sequence name: rmpb2ndb:US-10-652-927-23

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Sequence documentation:
; Sequence 23, Application US/10652927
; Publication No. US20040043408A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 28915/6280N3
; CURRENT APPLICATION NUMBER: US/10/652,927
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
```

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; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-927-23
```

Alignment of: us-10-726-967a-1 x US-10-652-927-23 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||::|::|::|::|::|::|::|::|
197 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT
```

37

165

Sequence name: rmpb2ndb:US-10-652-927-31

Sequence documentation:

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; Sequence 31, Application US/10652927
; Publication No. US20040043408A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; TITLE OF INVENTION: Therefor
; FILE REFERENCE: 29915/6280N3
; CURRENT APPLICATION NUMBER: US/10/652,927
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-927-31
```

Alignment of: us-10-726-967a-1 x US-10-652-927-31 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55

Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT
```

37

147

Sequence name: rmpb2ndb:US-10-652-830-23

Sequence documentation:

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; Sequence 23, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; TITLE OF INVENTION: Therefor
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-830-23
```

Alignment of: us-10-726-967a-1 x US-10-652-830-23 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||::|::|::|::|::|::|::|::|
197 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT
```

37

165

Sequence name: rmpb2ndb:US-10-652-830-31

Sequence documentation:

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; Sequence 31, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; TITLE OF INVENTION: Therefor
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; PRIOR FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
```



;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1998-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 23  
;; LENGTH: 1380  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-10-476-935-23

Alignment of: us-10-726-967a-1 x US-10-476-935-23 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSergIyLeuGIyAla  
:::|||||:::|:::|:::  
197 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37  
165

Sequence name: rmpb2ndb:US-10-476-935-31

Sequence documentation:

;; Sequence 31, Application US/10476935  
;; Publication No. US20040234976a1  
;; GENERAL INFORMATION:  
;; APPLICANT: Biotechnology et al.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
;; FILE REFERENCE: 28341/6280M1  
;; CURRENT APPLICATION NUMBER: US/10/476,935  
;; PRIOR FILING DATE: 2003-11-06  
;; PRIOR APPLICATION NUMBER: 09/416,901  
;; PRIOR FILING DATE: 1999-10-13  
;; PRIOR APPLICATION NUMBER: 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 31  
;; LENGTH: 1380  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-10-476-935-31

Alignment of: us-10-726-967a-1 x US-10-476-935-31 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSergIyLeuGIyAla  
:::|||||:::|:::|:::  
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37  
147

Sequence name: rmpb2ndb:US-10-940-867-23

Sequence documentation:  
;; Sequence 23, Application US/10940867  
;; Publication No. US20050026256A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Guiney, Mark E.  
;; APPLICANT: Bienkowski, Michael J.  
;; APPLICANT: Heinrichson, Robert L.  
;; APPLICANT: Parodi, Luis A.  
;; APPLICANT: Yan, Riqiang  
;; APPLICANT: Pharmacia & Upjohn Company  
;; TITLE OF INVENTION: Alzheimer's Disease Secretase  
;; FILE REFERENCE: 6177.PCPA  
;; CURRENT APPLICATION NUMBER: US/10/940,867  
;; PRIOR FILING DATE: 2004-09-14  
;; PRIOR APPLICATION NUMBER: US 09/806,194  
;; PRIOR FILING DATE: 2001-03-26  
;; PRIOR APPLICATION NUMBER: US 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 49  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 23  
;; LENGTH: 1380  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-10-940-867-23

Alignment of: us-10-726-967a-1 x US-10-940-867-23 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	348
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSergIyLeuGIyAla  
:::|||||:::|:::|:::  
197 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37  
165

Sequence name: rmpb2ndb:US-10-940-867-31

Sequence documentation:

;; Sequence 31, Application US/10940867  
;; Publication No. US20050026256A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Guiney, Mark E.  
;; APPLICANT: Bienkowski, Michael J.  
;; APPLICANT: Heinrichson, Robert L.  
;; APPLICANT: Parodi, Luis A.  
;; APPLICANT: Yan, Riqiang  
;; APPLICANT: Pharmacia & Upjohn Company  
;; TITLE OF INVENTION: Alzheimer's Disease Secretase  
;; FILE REFERENCE: 6177.PCPA  
;; CURRENT APPLICATION NUMBER: US/10/940,867  
;; PRIOR FILING DATE: 2004-09-14  
;; PRIOR APPLICATION NUMBER: US 09/806,194  
;; PRIOR FILING DATE: 2001-03-26  
;; PRIOR APPLICATION NUMBER: US 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 49  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 31  
;; LENGTH: 1380  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-10-940-867-31



27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
185 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37  
153

Sequence name: rnpbp2ndb:US-10-214-932-103

Sequence documentation:

; Sequence 103, Application US/10214932  
; Publication No. US20030100707A1  
; GENERAL INFORMATION:  
; APPLICANT: HWANG, Inhwan  
; APPLICANT: KIM, Dae Heon  
; APPLICANT: LEE, Yong Jik  
; TITLE OF INVENTION: SYSTEM FOR DETECTING PROTEASE  
; FILE REFERENCE: APO2/US  
; CURRENT APPLICATION NUMBER: US/10/214,932  
; CURRENT FILING DATE: 2002-08-08  
; NUMBER OF SEQ ID NOS: 133  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 103  
; LENGTH: 1506  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
; FEATURE:  
; NAME/KEY: gene  
; LOCATION: (1)..(1506)  
; OTHER INFORMATION: Gene for APP beta-secretase  
; NAME/KEY: CDS  
; LOCATION: (1)..(1503)  
; OTHER INFORMATION: APP beta-secretase  
; PUBLICATION INFORMATION:  
; DATABASE ACCESSION NUMBER: GenBank/AF201468  
; DATABASE ENTRY DATE: 1999-12-19  
; US-10-214-932-103

Alignment of: us-10-726-967a-1 x US-10-214-932-103 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	349
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37  
147

Sequence name: rnpbp2ndb:US-10-372-730-8

Sequence documentation:

; Sequence 8, Application US/10372730  
; Publication No. US20030167486A1  
; GENERAL INFORMATION:  
; APPLICANT: Jacobson, Helmut  
; APPLICANT: Moshbach-Ozmen, Laurence  
; APPLICANT: Neillbeck-Hochstetler, Peter  
; TITLE OF INVENTION: Double transgenic animal model for Alzheimer's Disease  
; FILE REFERENCE: Case 21132  
; CURRENT APPLICATION NUMBER: US/10/372,730  
; CURRENT FILING DATE: 2003-02-24  
; PRIOR APPLICATION NUMBER: EP02004331.1  
; PRIOR FILING DATE: 2002-03-01  
; NUMBER OF SEQ ID NOS: 19  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 8  
; LENGTH: 1506  
; TYPE: DNA

; ORGANISM: Homo sapiens  
US-10-372-730-8

Alignment of: us-10-726-967a-1 x US-10-372-730-8 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	349
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

37  
147

Sequence name: rnpbp2ndb:US-10-281-092-5

Sequence documentation:

; Sequence 5, Application US/10281092  
; Publication No. US20040121947A1  
; GENERAL INFORMATION:  
; APPLICANT: Ghosh, Arun K.  
; APPLICANT: Tang, Jordan J.N.  
; APPLICANT: Blicher, Geoffrey  
; APPLICANT: Chang, Wanpin  
; APPLICANT: Hong, Lin  
; APPLICANT: Koelsch, Gerald E.  
; APPLICANT: Loy, Jeffrey A.  
; APPLICANT: Turner, Robert T., III  
; TITLE OF INVENTION: COMPOUNDS WHICH INHIBIT BETA-SECRETASE  
; FILE REFERENCE: 2932.1001-004  
; CURRENT APPLICATION NUMBER: US/10/281,092  
; CURRENT FILING DATE: 2002-10-23  
; PRIOR APPLICATION NUMBER: US 10/032,818  
; PRIOR FILING DATE: 2001-12-28  
; PRIOR APPLICATION NUMBER: PCT US01/50826  
; PRIOR FILING DATE: 2001-12-28  
; PRIOR APPLICATION NUMBER: US 60/258,705  
; PRIOR FILING DATE: 2000-12-28  
; PRIOR APPLICATION NUMBER: US 60/275,756  
; PRIOR FILING DATE: 2001-03-14  
; PRIOR APPLICATION NUMBER: US 60/335,952  
; PRIOR FILING DATE: 2001-10-23  
; PRIOR APPLICATION NUMBER: US 60/333,545  
; PRIOR FILING DATE: 2001-11-27  
; PRIOR APPLICATION NUMBER: US 60/348,464  
; PRIOR FILING DATE: 2002-01-14  
; PRIOR APPLICATION NUMBER: US 60/348,615  
; PRIOR FILING DATE: 2002-01-14  
; PRIOR APPLICATION NUMBER: US 60/390,804  
; PRIOR FILING DATE: 2002-06-20  
; PRIOR APPLICATION NUMBER: US 60/397,557  
; PRIOR FILING DATE: 2002-07-19  
; Remaining Prior Application data removed - See File Wrapper or PALM.  
; NUMBER OF SEQ ID NOS: 59  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 5  
; LENGTH: 1506  
; TYPE: DNA  
; ORGANISM: Unknown  
; FEATURE:  
; OTHER INFORMATION: memapain 2  
US-10-281-092-5

Alignment of: us-10-726-967a-1 x US-10-281-092-5 ..

Alignment segment 1/1: (-)

Quality: 32.00      EScore: 349  
Matching length: 11  
Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82      Total Percent Identity: 54.55  
Gaps: 0

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|:::|:::|  
179 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

Sequence name: rnpb2ndb:US-10-275-339A-6

## Sequence documentation:

Sequence 6, Application US/10275339A  
Publication No. US2004010743A1  
GENERAL INFORMATION:  
APPLICANT: MIYAMOTO, Masasumi  
APPLICANT: MATSUI, Junji  
APPLICANT: FUKUMOTO, Hiroaki  
APPLICANT: TARUI, Naoki  
TITLE OF INVENTION: Beta Secretase Inhibitors  
FILE REFERENCE: 2729 USOP  
CURRENT APPLICATION NUMBER: US/10/275,339A  
CURRENT FILING DATE: 2003-10-30  
PRIOR APPLICATION NUMBER: PCT/JP01/04144  
PRIOR FILING DATE: 2001-05-18  
PRIOR APPLICATION NUMBER: JP 2000-152758  
PRIOR FILING DATE: 2000-05-19  
NUMBER OF SEQ ID NOS: 9  
SOFTWARE: PatentIn version 3.2  
SEQ ID NO 6  
LENGTH: 1527  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-275-339A-6

Alignment of: us-10-726-967a-1 x US-10-275-339A-6 ..

## Alignment segment 1/1: (-)

Quality: 32.00      EScore: 349  
Matching length: 11  
Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82      Total Percent Identity: 54.55  
Gaps: 0

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|:::|:::|  
179 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

Sequence name: rnpb2ndb:US-10-322-684-1

## Sequence documentation:

Sequence 1, Application US/10322684  
Publication No. US20030125257A1  
GENERAL INFORMATION:  
APPLICANT: Hoffmann-La Roche Inc.  
TITLE OF INVENTION: Assay and screening method for identification of inhibitors of beta  
SECRETASE  
FILE REFERENCE: Case 21066  
CURRENT APPLICATION NUMBER: US/10/322,684  
CURRENT FILING DATE: 2002-12-18  
PRIOR APPLICATION NUMBER: EP01130282.5  
PRIOR FILING DATE: 2001-12-20  
NUMBER OF SEQ ID NOS: 2  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 1  
LENGTH: 1542

TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-322-684-1

Alignment of: us-10-726-967a-1 x US-10-322-684-1 ..

## Alignment segment 1/1: (-)

Quality: 32.00      EScore: 349  
Matching length: 11  
Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82      Total Percent Identity: 54.55  
Gaps: 0

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|:::|:::|  
194 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

Sequence name: rnpb2ndb:US-09-794-927-5

## Sequence documentation:

Sequence 5, Application US/09794927  
Patent No. US20010016324A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Blenkowski, Michael J.  
APPLICANT: Henriksen, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Van, Ridgand  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280FG  
CURRENT APPLICATION NUMBER: US/09/794,927  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-927-5

Alignment of: us-10-726-967a-1 x US-09-794-927-5 ..

## Alignment segment 1/1: (-)

Quality: 32.00      EScore: 352  
Matching length: 11  
Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82      Total Percent Identity: 54.55  
Gaps: 0

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|:::|:::|  
179 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

Sequence name: rnpb2ndb:US-09-795-847-5

```

Sequence documentation:
Sequence 5, Application US/09795847
Patent No. US20010018208A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrikson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280BC
CURRENT APPLICATION NUMBER: US/09/795,847
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-09-795-847-5

Alignment of: us-10-726-967a-1 x US-09-795-847-5 ..

Alignment segment 1/1: (-)

      Matching length: 32.00      Total length: 352
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProlLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|  37
179 AAGCTGCCCCCTCGGCGGCTCTCGGCTCTCTCTCT  147

Sequence name: rmbp2ndb:US-09-794-743-5

Sequence documentation:
Sequence 5, Application US/09794743
Patent No. US20010021391A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrikson, Robert L.
APPLICANT: Parodi, Luis A.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: USES
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341/6280BC
CURRENT APPLICATION NUMBER: US/09/794,743
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 1977
TYPE: DNA
ORGANISM: Homo sapiens
US-09-795-847-5

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[illegible]



27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37  
147

Sequence name: rnpb2ndb:US-09-794-925-5

Sequence documentation:

Sequence 5, Application US/09794925  
Patent No. US20020064819A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

FILE REFERENCE: 28341/6280H1

CURRENT APPLICATION NUMBER: US/09/794,925

CURRENT FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 5

LENGTH: 1977

TYPE: DNA

ORGANISM: Homo sapiens

US-09-794-925-5

Alignment of: us-10-726-967a-1 x US-09-794-925-5

Alignment segment 1/1: (-)

Quality:	32.00	Score:	352
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37  
147

Sequence name: rnpb2ndb:US-09-681-442-5

Sequence documentation:

Sequence 5, Application US/09681442  
Patent No. US20020081634A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
APPLICANT: Heinrichson, Robert L.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

FILE REFERENCE: 28341/6280FG

CURRENT APPLICATION NUMBER: US/09/681,442

CURRENT FILING DATE: 2001-04-05

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-681-442-5

37  
147

Sequence name: rnpb2ndb:US-09-908-943A-3

Sequence documentation:

Sequence 3, Application US/09908943A  
Publication No. US20030017991A1  
GENERAL INFORMATION:  
APPLICANT: Yan, Riqiang  
APPLICANT: Tomasselli, Alfredo G.  
APPLICANT: Gurney, Mark E.  
APPLICANT: Emmons, Thomas L.  
APPLICANT: Bienkowski, Mike J.  
APPLICANT: Heinrichson, Robert L.  
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY

FILE REFERENCE: 29915/00281A.US1

CURRENT APPLICATION NUMBER: US/09/908,943A

CURRENT FILING DATE: 2001-07-19

PRIOR APPLICATION NUMBER: 60/219,795

PRIOR FILING DATE: 2000-07-19

NUMBER OF SEQ ID NOS: 197

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 3

LENGTH: 1977

TYPE: DNA

ORGANISM: Homo sapiens

US-09-908-943A-3

Alignment of: us-10-726-967a-1 x US-09-908-943A-3

Alignment segment 1/1: (-)

Quality:	32.00	Score:	352
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37  
147

Sequence name: rnpb2ndb:US-09-908-943A-3

Sequence documentation:

Sequence 3, Application US/09908943A  
Publication No. US20030017991A1  
GENERAL INFORMATION:  
APPLICANT: Yan, Riqiang  
APPLICANT: Tomasselli, Alfredo G.  
APPLICANT: Gurney, Mark E.  
APPLICANT: Emmons, Thomas L.  
APPLICANT: Bienkowski, Mike J.  
APPLICANT: Heinrichson, Robert L.  
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY

FILE REFERENCE: 29915/00281A.US1

CURRENT APPLICATION NUMBER: US/09/908,943A

CURRENT FILING DATE: 2001-07-19

PRIOR APPLICATION NUMBER: 60/219,795

PRIOR FILING DATE: 2000-07-19

NUMBER OF SEQ ID NOS: 197

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 3

LENGTH: 1977

TYPE: DNA

ORGANISM: Homo sapiens

US-09-908-943A-3

Alignment of: us-10-726-967a-1 x US-09-908-943A-3

Alignment segment 1/1: (-)

Quality:	32.00	Score:	352
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37  
147



```
; Sequence 5, Application US/10652830
; Publication No. US20040048303A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N1
; CURRENT APPLICATION NUMBER: US/10/652,830
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-830-5

Alignment of: us-10-726-967a-1 x US-10-652-830-5 ..

Alignment segment 1/1: (-)

      Matching Quality: 32.00      EScore: 352
      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::| 147
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

Sequence name: rnpb2ndb:US-10-652-045-5

Sequence documentation:
; Sequence 5, Application US/10652045
; Publication No. US20040166507A1
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280N2
; CURRENT APPLICATION NUMBER: US/10/652,045
; CURRENT FILING DATE: 2003-08-29
; PRIOR APPLICATION NUMBER: 09/794,925
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
```

```
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-652-045-5

Alignment of: us-10-726-967a-1 x US-10-652-045-5 ..

Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 352
      Matching length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::| 147
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

Sequence name: rnpb2ndb:US-10-801-467-3

Sequence documentation:
; Sequence 3, Application US/10801487
; Publication No. US20040241792A1
; GENERAL INFORMATION:
; APPLICANT: Yan et al.

Alignment of: us-10-726-967a-1 x US-10-476-935-5 ..

Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 352
      Matching length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::| 147
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

Sequence name: rnpb2ndb:US-10-476-935-5

Sequence documentation:
; Sequence 5, Application US/10476935
; Publication No. US20040234976A1
; GENERAL INFORMATION:
; APPLICANT: Belinkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M1
; CURRENT APPLICATION NUMBER: US/10/476,935
; CURRENT FILING DATE: 2003-11-06
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-476-935-5
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TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
FILE REFERENCE: 29915/00281F  
CURRENT APPLICATION NUMBER: US/10/801,487  
PRIOR FILING DATE: 2004-03-16  
PRIOR APPLICATION NUMBER: 09/908,943  
PRIOR FILING DATE: 2001-07-19  
PRIOR APPLICATION NUMBER: 60/219,795  
PRIOR FILING DATE: 2000-07-19  
NUMBER OF SEQ ID NOS: 197  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-801-487-3

Alignment of: us-10-726-967a-1 x US-10-801-487-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	352
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|  
179 AAGCTGCCCTCCGGCGGCTCTCGGCTCTC 147

Sequence name: rnpb2ndb:US-10-801-938-3

Sequence documentation:  
Sequence 3, Application US/10801938  
Publication No. US20040253706A1  
GENERAL INFORMATION:  
APPLICANT: Yan et al.  
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
FILE REFERENCE: 29915/00281D  
CURRENT APPLICATION NUMBER: US/10/801,938  
CURRENT FILING DATE: 2004-03-16  
PRIOR APPLICATION NUMBER: 09/908,943  
PRIOR FILING DATE: 2001-07-19  
PRIOR APPLICATION NUMBER: 60/219,795  
PRIOR FILING DATE: 2000-07-19  
NUMBER OF SEQ ID NOS: 197  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-801-938-3

Alignment of: us-10-726-967a-1 x US-10-801-938-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	352
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|  
179 AAGCTGCCCTCCGGCGGCTCTCGGCTCTC 147

Sequence name: rnpb2ndb:US-10-801-509-3

Sequence documentation:  
Sequence 3, Application US/10801509  
Publication No. US20040254341A1  
GENERAL INFORMATION:  
APPLICANT: Yan et al.  
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
FILE REFERENCE: 29915/00281C  
CURRENT APPLICATION NUMBER: US/10/801,509  
CURRENT FILING DATE: 2004-03-16  
PRIOR APPLICATION NUMBER: 09/908,943  
PRIOR FILING DATE: 2001-07-19  
PRIOR APPLICATION NUMBER: 60/219,795  
PRIOR FILING DATE: 2000-07-19  
NUMBER OF SEQ ID NOS: 197  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-801-509-3

Alignment of: us-10-726-967a-1 x US-10-801-509-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	352
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|  
179 AAGCTGCCCTCCGGCGGCTCTCGGCTCTC 147

Sequence name: rnpb2ndb:US-10-801-486-3

Sequence documentation:  
Sequence 3, Application US/10801486  
Publication No. US20040254342A1  
GENERAL INFORMATION:  
APPLICANT: Yan et al.  
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
FILE REFERENCE: 29915/00281B  
CURRENT APPLICATION NUMBER: US/10/801,486  
CURRENT FILING DATE: 2004-03-16  
PRIOR APPLICATION NUMBER: 09/908,943  
PRIOR FILING DATE: 2001-07-19  
PRIOR APPLICATION NUMBER: 60/219,795  
PRIOR FILING DATE: 2000-07-19  
NUMBER OF SEQ ID NOS: 197  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-801-486-3

Alignment of: us-10-726-967a-1 x US-10-801-486-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Escore:	352
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37

179 AGCTGCCCCCTCCGGCGGCTCTCGGCTCT

147

Sequence name: rnpb2ndb:US-10-940-867-5

Sequence documentation:

; Sequence 5, Application US/10940867  
; Publication No. US20050026256A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: Alzheimer's Disease Secretase  
; FILE REFERENCE: 6177.PCPA  
; CURRENT APPLICATION NUMBER: US/10/940,867  
; PRIOR FILING DATE: 2004-09-14  
; PRIOR APPLICATION NUMBER: US 09/806,194  
; PRIOR FILING DATE: 2001-03-26  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 49  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 5  
; LENGTH: 1977  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-940-867-5

Alignment of: us-10-726-967a-1 x US-10-940-867-5 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	352
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla

37

179 AGCTGCCCCCTCCGGCGGCTCTCGGCTCT

147

Sequence name: rnpb2ndb:US-10-477-076-5

Sequence documentation:

; Sequence 5, Application US/10477076  
; Publication No. US20050080232A1  
; GENERAL INFORMATION:  
; APPLICANT: Bienkowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M2  
; CURRENT APPLICATION NUMBER: US/10/477,076  
; PRIOR FILING DATE: 2003-11-06  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 5  
; LENGTH: 1977

TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-477-076-5

Alignment of: us-10-726-967a-1 x US-10-477-076-5 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	352
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla

37

179 AGCTGCCCCCTCCGGCGGCTCTCGGCTCT

147

Sequence name: rnpb2ndb:US-10-801-493-3

Sequence documentation:

; Sequence 3, Application US/10801493  
; Publication No. US20050096457A1  
; GENERAL INFORMATION:  
; APPLICANT: Yan et al.  
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
; FILE REFERENCE: 29915/00281E  
; CURRENT APPLICATION NUMBER: US/10/801,493  
; PRIOR FILING DATE: 2004-03-16  
; PRIOR APPLICATION NUMBER: 09/908,943  
; PRIOR FILING DATE: 2001-07-19  
; PRIOR APPLICATION NUMBER: 60/219,795  
; PRIOR FILING DATE: 2000-07-19  
; NUMBER OF SEQ ID NOS: 197  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 3  
; LENGTH: 1977  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-801-493-3

Alignment of: us-10-726-967a-1 x US-10-801-493-3 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Escore:	352
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla

37

179 AGCTGCCCCCTCCGGCGGCTCTCGGCTCT

147

Sequence name: rnpb2ndb:US-09-794-927-3

Sequence documentation:

; Sequence 3, Application US/09794927  
; Patent No. US20010016324A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; TITLE OF INVENTION: THEREFOR

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/ FILE REFERENCE: 28341/6280FG
/ CURRENT APPLICATION NUMBER: US/09/794,927
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-794-927-3
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Alignment of: us-10-726-967a-1 x US-09-794-927-3 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	353
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT
```

37  
147

Sequence name: rnpbp2ndb:US-09-795-847-3

Sequence documentation:

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/ Sequence 3, Application US/09795847
/ Patent No. US20010018208A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrikson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
/ TITLE OF INVENTION: USES
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 28341/6280DE
/ CURRENT APPLICATION NUMBER: US/09/795,847
/ CURRENT FILING DATE: 2001-02-28
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-795-847-3
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Alignment of: us-10-726-967a-1 x US-09-795-847-3 ..

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Alignment segment 1/1: (-)
Quality: 32.00
Matching length: 11
Matching Percent Similarity: 81.82
Total Percent Similarity: 81.82
Gaps: 0
Score: 353
Total length: 11
Matching Percent Identity: 54.55
Total Percent Identity: 54.55
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Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT
```

37  
147

Sequence name: rnpbp2ndb:US-09-794-743-3

Sequence documentation:

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/ Sequence 3, Application US/09794743
/ Patent No. US20010021391A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrikson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
/ TITLE OF INVENTION: USES
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 28341/6280BC
/ CURRENT APPLICATION NUMBER: US/09/794,743
/ CURRENT FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: Patentin Ver. 2.0
/ SEQ ID NO 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-794-743-3
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Alignment of: us-10-726-967a-1 x US-09-794-743-3 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	353
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT
```

37  
147

Sequence name: rnpbp2ndb:US-09-794-748-3

Sequence documentation:

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/ Sequence 3, Application US/09794748
/ Patent No. US20020037315A1
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
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PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-652-927-3

Alignment of: us-10-726-967a-1 x US-10-652-927-3 ..

Alignment segment 1/1: (-)  
Quality: 32.00  
Matching length: 11  
Matching Percent Similarity: 81.82  
Total length: 11  
Total Percent Identity: 54.55  
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCGGCGCTCTCGGCTCT

37  
147

Sequence name: rnpb2ndb:US-10-652-830-3

Sequence documentation:  
Sequence 3, Application US/10652830  
Publication No. US20040048303A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
TITLE OF INVENTION: Therefor  
FILE REFERENCE: 29915/6280N1  
CURRENT APPLICATION NUMBER: US/10/652,830  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-652-830-3

Alignment of: us-10-726-967a-1 x US-10-652-830-3 ..

Alignment segment 1/1: (-)  
Quality: 32.00

Escore: 353

Matching length: 11  
Matching Percent Similarity: 81.82  
Total length: 11  
Total Percent Identity: 54.55  
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCGGCGCTCTCGGCTCT

37  
147

Sequence name: rnpb2ndb:US-10-652-045-3

Sequence documentation:  
Sequence 3, Application US/10652045  
Publication No. US20040166507A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
TITLE OF INVENTION: Therefor  
FILE REFERENCE: 29915/6280N2  
CURRENT APPLICATION NUMBER: US/10/652,045  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-652-045-3

Alignment of: us-10-726-967a-1 x US-10-652-045-3 ..

Alignment segment 1/1: (-)  
Quality: 32.00  
Matching length: 11  
Matching Percent Similarity: 81.82  
Total length: 11  
Total Percent Identity: 54.55  
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCGGCGCTCTCGGCTCT

37  
147

Sequence name: rnpb2ndb:US-10-476-935-3

Sequence documentation:  
Sequence 3, Application US/10476935  
Publication No. US20040234976A1  
GENERAL INFORMATION:  
APPLICANT: Beinowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/6280M1  
CURRENT APPLICATION NUMBER: US/10/476,935  
CURRENT FILING DATE: 2003-11-06  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13

Sequence documentation:  
; Sequence 1, Application US/10801487  
; Publication No. US20040241792A1  
; GENERAL INFORMATION:  
; APPLICANT: Yan et al.  
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
; FILE REFERENCE: 29915/00281F  
; CURRENT APPLICATION NUMBER: US/10/801,487  
; CURRENT FILING DATE: 2004-03-16  
; PRIOR APPLICATION NUMBER: 09/908,943  
; PRIOR FILING DATE: 2001-07-19  
; PRIOR APPLICATION NUMBER: 60/219,795  
; PRIOR FILING DATE: 2000-07-19  
; NUMBER OF SEQ ID NOS: 197  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 1  
; LENGTH: 2070  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-476-935-3

Alignment of: us-10-726-967a-1 x US-10-476-935-3 ..

Alignment segment 1/1: (-)

Matching	Quality:	32.00	Score:	353
Percent	Similarity:	81.82	Total length:	11
Similarity:			Matching	Percent
			Identity:	Identity:
Gaps:		0	Total	Percent
			Percent	Identity:
			Identity:	

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||:::|  
179 AAGCTGCCCCCTCCGCGGCTCTCGGCTCT

37  
147

Sequence name: rnpb2ndb:US-10-801-487-1

Sequence documentation:  
; Sequence 1, Application US/10801487  
; Publication No. US20040241792A1  
; GENERAL INFORMATION:  
; APPLICANT: Yan et al.  
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
; FILE REFERENCE: 29915/00281F  
; CURRENT APPLICATION NUMBER: US/10/801,487  
; CURRENT FILING DATE: 2004-03-16  
; PRIOR APPLICATION NUMBER: 09/908,943  
; PRIOR FILING DATE: 2001-07-19  
; PRIOR APPLICATION NUMBER: 60/219,795  
; PRIOR FILING DATE: 2000-07-19  
; NUMBER OF SEQ ID NOS: 197  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 1  
; LENGTH: 2070  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-801-487-1

Alignment of: us-10-726-967a-1 x US-10-801-487-1 ..

Alignment segment 1/1: (-)

Matching	Quality:	32.00	Score:	353
Percent	Similarity:	81.82	Total length:	11
Similarity:			Matching	Percent
			Identity:	Identity:
Gaps:		0	Total	Percent
			Percent	Identity:
			Identity:	

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||:::|  
179 AAGCTGCCCCCTCCGCGGCTCTCGGCTCT

37  
147

Sequence name: rnpb2ndb:US-10-801-938-1

Sequence documentation:  
; Sequence 1, Application US/10801938  
; Publication No. US20040253706A1  
; GENERAL INFORMATION:  
; APPLICANT: Yan et al.  
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
; FILE REFERENCE: 29915/00281D  
; CURRENT APPLICATION NUMBER: US/10/801,938  
; CURRENT FILING DATE: 2004-03-16  
; PRIOR APPLICATION NUMBER: 09/908,943  
; PRIOR FILING DATE: 2001-07-19  
; PRIOR APPLICATION NUMBER: 60/219,795  
; PRIOR FILING DATE: 2000-07-19  
; NUMBER OF SEQ ID NOS: 197  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 1  
; LENGTH: 2070  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-801-938-1

Alignment of: us-10-726-967a-1 x US-10-801-938-1 ..

Alignment segment 1/1: (-)

Matching	Quality:	32.00	Score:	353
Percent	Similarity:	81.82	Total length:	11
Similarity:			Matching	Percent
			Identity:	Identity:
Gaps:		0	Total	Percent
			Percent	Identity:
			Identity:	

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||:::|  
179 AAGCTGCCCCCTCCGCGGCTCTCGGCTCT

37  
147

Sequence name: rnpb2ndb:US-10-801-509-1

Sequence documentation:  
; Sequence 1, Application US/10801509  
; Publication No. US20040254341A1  
; GENERAL INFORMATION:  
; APPLICANT: Yan et al.  
; TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY  
; FILE REFERENCE: 29915/00281C  
; CURRENT APPLICATION NUMBER: US/10/801,509  
; CURRENT FILING DATE: 2004-03-16  
; PRIOR APPLICATION NUMBER: 09/908,943  
; PRIOR FILING DATE: 2001-07-19  
; PRIOR APPLICATION NUMBER: 60/219,795  
; PRIOR FILING DATE: 2000-07-19  
; NUMBER OF SEQ ID NOS: 197  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 1  
; LENGTH: 2070  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-10-801-509-1

Alignment of: us-10-726-967a-1 x US-10-801-509-1 ..

Alignment segment 1/1: (-)

Matching	Quality:	32.00	Score:	353
Percent	Similarity:	81.82	Total length:	11
Similarity:			Matching	Percent
			Identity:	Identity:
Gaps:		0	Total	Percent
			Percent	Identity:
			Identity:	

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla

37

179 AGCTGCCCCCTCCGGCGGCTCTCGGCTCT

147

Sequence name: rnpb2ndb:US-10-801-486-1

Sequence documentation:

Publication 1, Application US/10801486  
Publication No. US20040254342A1  
GENERAL INFORMATION:

APPLICANT: Yan et al.

TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY

FILE REFERENCE: 29915/00281B

CURRENT APPLICATION NUMBER: US/10/801,486

CURRENT FILING DATE: 2004-03-16

PRIOR APPLICATION NUMBER: 09/908,943

PRIOR FILING DATE: 2001-07-19

PRIOR APPLICATION NUMBER: 60/219,795

PRIOR FILING DATE: 2000-07-19

NUMBER OF SEQ ID NOS: 197

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 1

LENGTH: 2070

TYPE: DNA

ORGANISM: Homo sapiens

US-10-801-486-1

Alignment of: us-10-726-967a-1 x US-10-801-486-1 ..

Alignment segment 1/1: (-)

Matching	Quality:	32.00	Score:	353
Percent Similarity:	11		Total length:	11
Total Percent Similarity:	81.82	Matching	Percent Identity:	54.55
Gaps:	0	Total	Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla

37

179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

147

Sequence name: rnpb2ndb:US-10-940-867-3

Sequence documentation:

Publication 3, Application US/10940867

Publication No. US20050026256A1

GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.

APPLICANT: Bienkowski, Michael J.

APPLICANT: Heinrichson, Robert L.

APPLICANT: Parodi, Luis A.

APPLICANT: Pharmacia & Upjohn Company

TITLE OF INVENTION: Alzheimer's Disease Secretase

FILE REFERENCE: 6177.PCPA

CURRENT APPLICATION NUMBER: US/10/940,867

CURRENT FILING DATE: 2004-09-14

PRIOR APPLICATION NUMBER: US 09/806,194

PRIOR FILING DATE: 2001-03-26

PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 49

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 3

LENGTH: 2070

TYPE: DNA

ORGANISM: Homo sapiens

US-10-940-867-3

Alignment of: us-10-726-967a-1 x US-10-940-867-3 ..

Alignment segment 1/1: (-)

Matching	Quality:	32.00	Score:	353
Percent Similarity:	11		Total length:	11
Total Percent Similarity:	81.82	Matching	Percent Identity:	54.55
Gaps:	0	Total	Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla

37

179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

147

Sequence name: rnpb2ndb:US-10-477-076-3

Sequence documentation:

Publication 3, Application US/10477076

Publication No. US20050080232A1

GENERAL INFORMATION:

APPLICANT: Beinowski et al.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

FILE REFERENCE: 28341/6280M2

CURRENT APPLICATION NUMBER: US/10/477,076

CURRENT FILING DATE: 2003-11-06

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 3

LENGTH: 2070

TYPE: DNA

ORGANISM: Homo sapiens

US-10-477-076-3

Alignment of: us-10-726-967a-1 x US-10-477-076-3 ..

Alignment segment 1/1: (-)

Matching	Quality:	32.00	Score:	353
Percent Similarity:	11		Total length:	11
Total Percent Similarity:	81.82	Matching	Percent Identity:	54.55
Gaps:	0	Total	Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla

37

179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

147

Sequence name: rnpb2ndb:US-10-801-493-1

Sequence documentation:

Publication 1, Application US/10801493

Publication No. US20050096457A1

GENERAL INFORMATION:

APPLICANT: Yan et al.

TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY

FILE REFERENCE: 29915/00281B

CURRENT APPLICATION NUMBER: US/10/801,493

CURRENT FILING DATE: 2004-03-16

PRIOR APPLICATION NUMBER: 09/908,943

PRIOR FILING DATE: 2001-07-19

PRIOR APPLICATION NUMBER: 60/219,795

;; PRIOR FILING DATE: 2000-07-19  
;; NUMBER OF SEQ ID NOS: 197  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 1  
;; LENGTH: 2070  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-10-801-493-1

Alignment of: us-10-726-967a-1 x US-10-801-493-1 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Escore:	353
Matching Percent Similarity:	81.82	Total length:	11
Total Percent Similarity:	81.82	Matching Percent Identity:	54.55
Gaps:	0	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGCGCGGCTCTCTCGGGCTCT

37  
147

Sequence name: rnpbp2ndb.US-09-969-671A-1

Sequence documentation:

;; Sequence 1, Application US/09969671A  
;; Publication No. US20030036112A1  
;; GENERAL INFORMATION:  
;; APPLICANT: CHAPMAN, CONRAD G.  
;; APPLICANT: MURPHY, KAY  
;; APPLICANT: POWELL, DAVID J.  
;; APPLICANT: SMITH, TRUDI S.  
;; TITLE OF INVENTION: ASP2  
;; FILE REFERENCE: GH-70368-D1  
;; CURRENT APPLICATION NUMBER: US/09/969, 671A  
;; PRIOR FILING DATE: 2001-10-03  
;; PRIOR APPLICATION NUMBER: UK 9701684.4  
;; PRIOR FILING DATE: 1997-01-28  
;; PRIOR APPLICATION NUMBER: 09/009,191  
;; PRIOR FILING DATE: 1998-01-20  
;; PRIOR APPLICATION NUMBER: 09/694,200  
;; PRIOR FILING DATE: 2000-10-23  
;; NUMBER OF SEQ ID NOS: 6  
;; SOFTWARE: FastSeq for Windows Version 4.0  
;; SEQ ID NO 1  
;; LENGTH: 2541  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
;; FEATURE:  
;; NAME/KEY: unknown  
;; LOCATION: (2455) (2456) (2463) (2478) (2480) (2497) (2507) (2509) (2512) (2516)  
;; LOCATION: (2520) (2522) (2525) (2529) (2539) (2540)  
;; OTHER INFORMATION: wherein n can be represented by a, c, t, or g  
US-09-969-671A-1

Alignment of: us-10-726-967a-1 x US-09-969-671A-1 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Escore:	355
Matching Percent Similarity:	81.82	Total length:	11
Total Percent Similarity:	81.82	Matching Percent Identity:	54.55
Gaps:	0	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGCGCGGCTCTCTCGGGCTCT

37  
147

Sequence name: rnpbp2ndb.US-10-308-365-1

Sequence documentation:

;; Sequence 1, Application US/10308365  
;; Publication No. US20030109022A1  
;; GENERAL INFORMATION:  
;; APPLICANT: CHAPMAN, CONRAD G.  
;; APPLICANT: MURPHY, KAY  
;; APPLICANT: POWELL, DAVID J.  
;; APPLICANT: SMITH, TRUDI S.  
;; TITLE OF INVENTION: ASP 2  
;; FILE REFERENCE: GH-70368-2  
;; CURRENT APPLICATION NUMBER: US/10/308,365  
;; CURRENT FILING DATE: 2002-12-03  
;; PRIOR APPLICATION NUMBER: US/09/694,200  
;; PRIOR FILING DATE: 2000-10-23  
;; PRIOR APPLICATION NUMBER: UK 9701684.4  
;; PRIOR FILING DATE: 1997-01-28  
;; PRIOR APPLICATION NUMBER: 09/009,191  
;; PRIOR FILING DATE: 1998-01-20  
;; NUMBER OF SEQ ID NOS: 6  
;; SOFTWARE: FastSeq for Windows Version 3.0  
;; SEQ ID NO 1  
;; LENGTH: 2541  
;; TYPE: DNA  
;; ORGANISM: HOMO SAPIENS  
;; FEATURE: FEATURE: MISCELLANEOUS FEATURE  
;; NAME/KEY: UNSURE  
;; LOCATION: (2455) (2456) (2463) (2478) (2480) (2497) (2507) (2509) (2512) (2516) (2520)  
;; LOCATION: (2522) (2525) (2529) (2539) (2540)  
;; OTHER INFORMATION: OTHER INFORMATION: n= a, g, c or t  
US-10-308-365-1

Alignment of: us-10-726-967a-1 x US-10-308-365-1 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Escore:	355
Matching Percent Similarity:	81.82	Total length:	11
Total Percent Similarity:	81.82	Matching Percent Identity:	54.55
Gaps:	0	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGCGCGGCTCTCTCGGGCTCT

37  
147

Sequence name: rnpbp2ndb.US-10-829-717-1

Sequence documentation:

;; Sequence 1, Application US/10829717  
;; Publication No. US20050101556A1  
;; GENERAL INFORMATION:  
;; APPLICANT: CHAPMAN, CONRAD G.  
;; APPLICANT: MURPHY, KAY  
;; APPLICANT: POWELL, DAVID J.  
;; APPLICANT: SMITH, TRUDI S.  
;; TITLE OF INVENTION: ASP 2  
;; FILE REFERENCE: GH-70368-2  
;; CURRENT APPLICATION NUMBER: US/10/829,717  
;; PRIOR FILING DATE: 2004-04-22  
;; PRIOR APPLICATION NUMBER: US/10/308,365  
;; PRIOR FILING DATE: 2002-12-03  
;; PRIOR APPLICATION NUMBER: US/09/694,200  
;; PRIOR FILING DATE: 2000-10-23  
;; PRIOR APPLICATION NUMBER: UK 9701684.4  
;; PRIOR FILING DATE: 1997-01-28  
;; PRIOR APPLICATION NUMBER: 09/009,191  
;; PRIOR FILING DATE: 1998-01-20  
;; NUMBER OF SEQ ID NOS: 6



? PRIOR APPLICATION NUMBER: 60/210,292  
 ? PRIOR FILING DATE: 2000-06-08  
 ? NUMBER OF SEQ ID NOS: 31  
 ? SOFTWARE: PatentIn Ver. 2.1  
 ? SEQ ID NO 1  
 ? LENGTH: 3252  
 ? TYPE: DNA  
 ? ORGANISM: Homo sapiens  
 ? US-09-795-303A-1

Alignment of: us-10-726-967a-1 x US-09-795-903A-1 . .

Alignment segment 1/1: (-)

Quality:	32.00	Escape:	358
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

**Alignment:**

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
140 AAGTGCCCTCCGGCCGGGCTCTCCGGGCTCT

37

108

Sequence name: rnpbp2ndb:US-10-032-818-1

**Sequence documentation:**

```

Sequence 1, Application US/10037818
Publication No. US20030092629A1
GENERAL INFORMATION:
APPLICANT: Tang, Jordan J.N.
APPLICANT: Koelsch, Gerald
APPLICANT: Ghosh, Arun K.
TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
FILE REFERENCE: 2932.1006-007
CURRENT APPLICATION NUMBER: US/10/032,818
CURRENT FILING DATE: 2001-12-28
PRIOR APPLICATION NUMBER: US 60/275,756
PRIOR FILING DATE: 2001-03-14
PRIOR APPLICATION NUMBER: US 60/258,705
PRIOR FILING DATE: 2000-12-28
NUMBER OF SEQ ID NOS: 83
SOFTWARE: PasteSeq for Windows Version 4.0
SEQ ID NO 1
LENGTH: 3252
TYPE: DNA
ORGANISM: Homo sapiens
US-10-032-818-1

```

Alignment of: us-10-726-967a-1 x US-10-032-818-1 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	358
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

**Alignment:**

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
140 AAGTCGCCCTCCGCCGGGCTCTCGGGCTCT

37  
108

Sequence name: rnpbp2ndb:US-10-820-953-1

```
Sequence documentation:
; Sequence 1, Application US/10820953
; Publication No. US20040167075A1
; GENERAL INFORMATION:
```

```

1  APPLICANT: Tang, Jordan J.N.
2  APPLICANT: Hong, Lin
3  APPLICANT: Ghosh, Arun K.
4  TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
5  FILE REFERENCE: OMRF 182
6  CURRENT FILING DATE: 2004-04-08
7  PRIOR APPLICATION NUMBER: US/10/820,953
8  PRIOR FILING DATE: 2000-06-27
9  PRIOR APPLICATION NUMBER: 60/141,363
10 PRIOR FILING DATE: 1999-06-28
11 PRIOR APPLICATION NUMBER: 60/168,060
12 PRIOR FILING DATE: 1999-11-30
13 PRIOR APPLICATION NUMBER: 60/177,836
14 PRIOR FILING DATE: 2000-01-25
15 PRIOR APPLICATION NUMBER: 60/178,368
16 PRIOR FILING DATE: 2000-01-27
17 PRIOR APPLICATION NUMBER: 60/210,292
18 PRIOR FILING DATE: 2000-06-08
19 NUMBER OF SEQ ID NOS: 31
20 SOFTWARE: PatentIn Ver. 2.1
21 SEQ ID NO 1
22 LENGTH: 3252
23 TYPE: DNA
24 ORGANISM: Homo sapiens
25 US-10-820-953-1

```

Alignment of: us-10-726-967a-1 x US-10-820-953-1 ..

Alignment segment 1/1: (-)

Quality:	32.00	Baccoré:	358
Matching Length:	11	Total Length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

**Alignment:**

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
140 AAGCTGCCCTCCGCGCGGCTCTCTGGGCTCT

37  
108

Sequence name: rnpbp2ndb:US-10-773-754-1

**Sequence documentation:**

Sequence 1, Application US/10773754  
Publication No. US20040220079A1  
GENERAL INFORMATION:  
APPLICANT: Koelsch, Gerald  
APPLICANT: Tang, Jordan J. N.  
APPLICANT: Hong, Lin  
APPLICANT: Ghosh, Arun K.  
APPLICANT: The Board of Trustees of the University of Illinois  
TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof  
FILE REFERENCE: 022266-000930US  
CURRENT APPLICATION NUMBER: US/10/773,754  
CURRENT FILING DATE: 2004-02-06  
PRIOR APPLICATION NUMBER: US 60/141,363  
PRIOR FILING DATE: 1999-06-28  
PRIOR APPLICATION NUMBER: US 60/168,060  
PRIOR FILING DATE: 1999-11-30  
PRIOR APPLICATION NUMBER: US 60/177,836  
PRIOR FILING DATE: 2000-01-25  
PRIOR APPLICATION NUMBER: US 60/178,368  
PRIOR FILING DATE: 2000-01-27  
PRIOR APPLICATION NUMBER: US 60/210,292  
PRIOR FILING DATE: 2000-06-08  
PRIOR APPLICATION NUMBER: US 09/603,713  
PRIOR FILING DATE: 2000-06-27  
PRIOR APPLICATION NUMBER: US 09/845,226  
PRIOR FILING DATE: 2001-04-30







TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/6280FG  
CURRENT APPLICATION NUMBER: US/09/681,442  
CURRENT FILING DATE: 2001-04-05  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 27  
LENGTH: 1278  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-681-442-27

Alignment of: us-10-726-967a-1 x US-09-681-442-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	365
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38  
|||||.....|  
1170 CGCTGGCCATGTGCACGATGAGTTTCAGACGGCGGTGGAAGGCC 1217

Sequence name: rnpb2ndb:US-09-869-414-27

Sequence documentation:  
Sequence 27, Application US/09869414  
Publication No. US20030077226A1  
GENERAL INFORMATION:  
APPLICANT: Beinowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M  
CURRENT APPLICATION NUMBER: US/09/869,414  
CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 27  
LENGTH: 1278  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-869-414-27

Alignment of: us-10-726-967a-1 x US-09-869-414-27 ..

Alignment segment 1/1: (+)

Quality: 28.00

Score: 365

Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38  
|||||.....|  
1170 CGCTGGCCATGTGCACGATGAGTTTCAGACGGCGGTGGAAGGCC 1217

Sequence name: rnpb2ndb:US-09-548-366-27

Sequence documentation:

Sequence 27, Application US/09548366  
Publication No. US20030104365A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
FILE REFERENCE: 28341/6280A  
CURRENT APPLICATION NUMBER: US/09/548,366  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 65  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 27  
LENGTH: 1278  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-366-27

Alignment of: us-10-726-967a-1 x US-09-548-366-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	365
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38  
|||||.....|  
1170 CGCTGGCCATGTGCACGATGAGTTTCAGACGGCGGTGGAAGGCC 1217

Sequence name: rnpb2ndb:US-10-652-927-27

Sequence documentation:  
Sequence 27, Application US/10652927  
Publication No. US20040043408A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

Sequence name: rnpb2ndb:US-10-652-927-27

Sequence documentation:

Sequence 27, Application US/10652927  
Publication No. US20040043408A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 28341/6280M  
CURRENT APPLICATION NUMBER: US/10/652,927  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38  
|||||.....|  
1170 CGCTGGCCATGTGCACGATGAGTTTCAGACGGCGGTGGAAGGCC 1217

Sequence name: rnpb2ndb:US-10-652-927-27

Sequence documentation:

Sequence 27, Application US/10652927  
Publication No. US20040043408A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 28341/6280M  
CURRENT APPLICATION NUMBER: US/10/652,927  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27

;; PRIOR APPLICATION NUMBER: 09/416,901  
;; PRIOR FILING DATE: 1999-10-13  
;; PRIOR APPLICATION NUMBER: 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 74  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 27  
;; LENGTH: 1278  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-10-652-927-27

Alignment of: us-10-726-967a-1 x US-10-652-927-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	365
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
|||||  
1170 CGCTTGCATGTGCACGATGATTCAGACGCGCGGTGGAAGGCC 1217

Sequence name: rnpb2ndb:US-10-652-830-27

Sequence documentation:

;; Sequence 27, Application US/10652830  
;; Publication No. US20040048303A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Gurney et al.  
;; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
;; FILE REFERENCE: 29915/6280N1  
;; CURRENT APPLICATION NUMBER: US/10/652,830  
;; PRIOR FILING DATE: 2003-08-29  
;; PRIOR APPLICATION NUMBER: 09/794,925  
;; PRIOR FILING DATE: 2001-02-27  
;; PRIOR APPLICATION NUMBER: 09/416,901  
;; PRIOR FILING DATE: 1999-10-13  
;; PRIOR APPLICATION NUMBER: 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 74  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 27  
;; LENGTH: 1278  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-10-652-830-27

Alignment of: us-10-726-967a-1 x US-10-652-830-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	365
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33

Total Percent Similarity: 62.50 Total Percent Identity: 43.75  
Gaps: 1

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
|||||  
1170 CGCTTGCATGTGCACGATGATTCAGACGCGCGGTGGAAGGCC 1217

Sequence name: rnpb2ndb:US-10-652-045-27

Sequence documentation:

;; Sequence 27, Application US/10652045  
;; Publication No. US20040166507A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Gurney et al.  
;; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
;; FILE REFERENCE: 29915/6280N2  
;; CURRENT APPLICATION NUMBER: US/10/652,045  
;; PRIOR FILING DATE: 2003-08-29  
;; PRIOR APPLICATION NUMBER: 09/794,925  
;; PRIOR FILING DATE: 2001-02-27  
;; PRIOR APPLICATION NUMBER: 09/416,901  
;; PRIOR FILING DATE: 1999-10-13  
;; PRIOR APPLICATION NUMBER: 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 74  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 27  
;; LENGTH: 1278  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-10-652-045-27

Alignment of: us-10-726-967a-1 x US-10-652-045-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	365
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
|||||  
1170 CGCTTGCATGTGCACGATGATTCAGACGCGCGGTGGAAGGCC 1217

Sequence name: rnpb2ndb:US-10-476-935-27

Sequence documentation:

;; Sequence 27, Application US/10476935  
;; Publication No. US20040234976A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Beinkowski et al.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
;; FILE REFERENCE: 28341/6280M1  
;; CURRENT APPLICATION NUMBER: US/10/476,935  
;; PRIOR FILING DATE: 2003-11-06  
;; PRIOR APPLICATION NUMBER: 09/416,901  
;; PRIOR FILING DATE: 1999-10-13  
;; PRIOR APPLICATION NUMBER: 60/155,493  
;; PRIOR FILING DATE: 1999-09-23



Alignment of: us-10-726-967a-1 x US-10-627-473-7 ..

Alignment segment 1/1: (-)

Quality:	28.00	Escore:	366
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	45.45
Total Percent Similarity:	81.82	Total Percent Identity:	45.45

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|||||  
185 AAGCTGCGCTTCGCGCGCGCTCTCGGCTCT 153

Sequence name: rnpbp2ndb:US-10-627-473-15

Sequence documentation:

Publication 15, Application US/10627473  
GENERAL INFORMATION:  
APPLICANT: VUILARD, LAURENT MICHEL MARIE  
APPLICANT: PATEL, SAHIL JOE  
APPLICANT: YON, JEFFREY ROLAND  
APPLICANT: CLEASHY, ANNE  
APPLICANT: HAMILTON, BRUCE JOHN  
APPLICANT: SHAH, ALBEM  
TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME  
FILE REFERENCE: 674553-2002.1  
CURRENT APPLICATION NUMBER: US/10/627,473  
CURRENT FILING DATE: 2003-07-25  
PRIOR APPLICATION NUMBER: 60/398,681  
PRIOR FILING DATE: 2002-07-26  
NUMBER OF SEQ ID NOS: 46  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 15  
LENGTH: 1386  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-627-473-15

Alignment of: us-10-726-967a-1 x US-10-627-473-15 ..

Alignment segment 1/1: (-)

Quality:	28.00	Escore:	366
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	45.45
Total Percent Similarity:	81.82	Total Percent Identity:	45.45

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|||||  
185 AAGCTGCGCTTCGCGCGCGCTCTCGGCTCT 153

Sequence name: rnpbp2ndb:US-09-969-671A-3

Sequence documentation:

Publication 3, Application US/09969671A  
GENERAL INFORMATION:  
APPLICANT: CHAPMAN, CONRAD G.  
APPLICANT: MURPHY, KAY  
APPLICANT: POWELL, DAVID J.  
APPLICANT: SMITH, TRUDI S.  
TITLE OF INVENTION: ASP2  
FILE REFERENCE: GH-70368-D1  
CURRENT APPLICATION NUMBER: US/09/969,671A

CURRENT FILING DATE: 2001-10-03

PRIOR APPLICATION NUMBER: UK 9701684.4

PRIOR FILING DATE: 1997-01-28

PRIOR APPLICATION NUMBER: 09/009,191

PRIOR FILING DATE: 1998-01-20

PRIOR APPLICATION NUMBER: 09/694,200

PRIOR FILING DATE: 2000-10-23

NUMBER OF SEQ ID NOS: 6

SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 3

LENGTH: 2370

TYPE: DNA

ORGANISM: Homo sapiens

FEATURE:

NAME/KEY:

LOCATION: (2284) (2285) (2292) (2307) (2309) (2326) (2336) (2338) (2341) (2345)

LOCATION: (2349) (2351) (2354) (2358) (2368) (2369)

OTHER INFORMATION: wherein n can be represented by a, c, t, or g

US-09-969-671A-3

Alignment of: us-10-726-967a-1 x US-09-969-671A-3 ..

Alignment segment 1/1: (+)

Quality:	28.00	Escore:	371
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38  
|||||:::|||||  
1083 CGCTGCGCATGTGCACATGATCAGACGCGCGCTGGAAGCCCC 1130

Sequence name: rnpbp2ndb:US-10-308-365-3

Sequence documentation:

Publication 3, Application US/10308365  
GENERAL INFORMATION:  
APPLICANT: CHAPMAN, CONRAD G.  
APPLICANT: MURPHY, KAY  
APPLICANT: POWELL, DAVID J.  
APPLICANT: SMITH, TRUDI S.  
TITLE OF INVENTION: ASP 2  
FILE REFERENCE: GH-70368-2  
CURRENT APPLICATION NUMBER: US/10/308,365  
CURRENT FILING DATE: 2002-12-03  
PRIOR APPLICATION NUMBER: US/09/694,200  
PRIOR FILING DATE: 2000-10-23  
PRIOR APPLICATION NUMBER: UK 9701684.4  
PRIOR FILING DATE: 1997-01-28  
PRIOR APPLICATION NUMBER: 09/009,191  
PRIOR FILING DATE: 1998-01-20  
NUMBER OF SEQ ID NOS: 6  
SOFTWARE: FastSeq for Windows Version 3.0  
SEQ ID NO 3  
LENGTH: 2370  
TYPE: DNA  
ORGANISM: HOMO SAPIENS  
FEATURE: FEATURE: MISCELLANEOUS FEATURE  
NAME/KEY: UNSURE  
LOCATION: (2284) (2285) (2292) (2307) (2309) (2326) (2336) (2338) (2341) (2345)  
LOCATION: (2349) (2351) (2354) (2358) (2368) (2369)  
OTHER INFORMATION: OTHER INFORMATION: n= a, g, c or t  
US-10-308-365-3

Alignment of: us-10-726-967a-1 x US-10-308-365-3 ..

Alignment segment 1/1: (+)

LENGTH: 2043  
TYPE: DNA

TYPE: DNA

ORGANISM: Mus musculus  
US-09-795-847-7

Alignment of: us-10-726-967a-1 x US-09-795-847-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	374
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38  
1562 AGGGAACCAACCCAGATGTGTCCAGGGCGCTTCCA 1527

Sequence name: rnpbp2ndb:US-09-794-743-7

Sequence documentation:

Sequence 7, Application US/09794743  
Patent No. US20010021391A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES  
FILE REFERENCE: 28341/6280BC  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: US/09/794,743  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 7  
LENGTH: 2043  
TYPE: DNA  
ORGANISM: Mus musculus  
US-09-794-743-7

Alignment of: us-10-726-967a-1 x US-09-794-743-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	374
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38  
1562 AGGGAACCAACCCAGATGTGTCCAGGGCGCTTCCA 1527

Sequence name: rnpbp2ndb:US-09-794-748-7

Sequence documentation:

Sequence 7, Application US/09794748  
Patent No. US20020037315A1

GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
TITLE OF INVENTION: USES

FILE REFERENCE: 28341/6280JL

CURRENT FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 7

LENGTH: 2043

TYPE: DNA

ORGANISM: Mus musculus

US-09-794-748-7

Alignment of: us-10-726-967a-1 x US-09-794-748-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	374
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38  
1562 AGGGAACCAACCCAGATGTGTCCAGGGCGCTTCCA 1527

Sequence name: rnpbp2ndb:US-09-794-925-7

Sequence documentation:

Sequence 7, Application US/09794925  
Patent No. US20020064819A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/6280H1  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: US/09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594



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SOFTWARE: PatentIn Ver. 2.0
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LENGTH: 2043  
TYPE: DNA  
ORGANISM: Mus musculus  
US-10-652-045-7

Alignment of: us-10-726-967a-1 x US-10-652-045-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	374
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38  
1562 AGGGAACCAACCGATGCTCCAGGGCGCTCCCA 1527

Sequence name: rnpb2ndb:US-10-476-935-7

Sequence documentation:

Sequence 7, Application US/10476935  
Publication No. US20040234976A1  
GENERAL INFORMATION:  
APPLICANT: Belinkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M1  
CURRENT APPLICATION NUMBER: US/10/476,935  
CURRENT FILING DATE: 2003-11-06  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 7  
LENGTH: 2043  
TYPE: DNA  
ORGANISM: Mus musculus  
US-10-476-935-7

Alignment of: us-10-726-967a-1 x US-10-476-935-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	374
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38  
1562 AGGGAACCAACCGATGCTCCAGGGCGCTCCCA 1527

Sequence name: rnpb2ndb:US-10-940-867-7

Sequence documentation:

Sequence 7, Application US/10940867  
Publication No. US20050026256A1  
GENERAL INFORMATION:

APPLICANT: Gurney, Mark B.  
APPLICANT: Blenkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
APPLICANT: Pharmacia & Upjohn Company  
TITLE OF INVENTION: Alzheimer's Disease Secretase  
FILE REFERENCE: 6177, PCPA

CURRENT APPLICATION NUMBER: US/10/940,867  
CURRENT FILING DATE: 2004-09-14  
PRIOR APPLICATION NUMBER: US 09/806,194  
PRIOR FILING DATE: 2001-03-26  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 49  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 7  
LENGTH: 2043  
TYPE: DNA  
ORGANISM: Mus musculus  
US-10-940-867-7

Alignment of: us-10-726-967a-1 x US-10-940-867-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	374
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38  
1562 AGGGAACCAACCGATGCTCCAGGGCGCTCCCA 1527

Sequence name: rnpb2ndb:US-10-477-076-7

Sequence documentation:

Sequence 7, Application US/10477076  
Publication No. US2005008232A1  
GENERAL INFORMATION:  
APPLICANT: Belinkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M2  
CURRENT APPLICATION NUMBER: US/10/477,076  
CURRENT FILING DATE: 2003-11-06  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 7  
LENGTH: 2043  
TYPE: DNA  
ORGANISM: Mus musculus  
US-10-477-076-7

Alignment of: us-10-726-967a-1 x US-10-477-076-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	374
----------	-------	--------	-----



US-09-794-743-27

Alignment of: us-10-726-967a-1 x US-09-794-743-27 ..

Alignment segment 1/1: (-)

	Quality:	26.00		Score:	373
Matching length:	8		Total length:	8	
Percent Similarity:	87.50		Percent Identity:	62.50	
Total Similarity:	87.50		Total Identity:	62.50	
Gaps:	0				

Alignment:

31	ArgSerGlyLeuGlyGlyAlaPro	38
:	:	
242	AGGAGGGGTGGGGGCGACACCC	219

Sequence name: rnpb2ndb:US-09-794-748-27

Sequence documentation:

; Sequence 27, Application US/09794748  
; Patent No. US20020037315A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
; TITLE OF INVENTION: USES  
; FILE REFERENCE: 28341/62801L  
; CURRENT APPLICATION NUMBER: US/09/794,748  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 27  
; LENGTH: 1278  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
; US-09-794-748-27

Alignment of: us-10-726-967a-1 x US-09-794-748-27 ..

Alignment segment 1/1: (-)

	Quality:	26.00		Score:	373
Matching length:	8		Total length:	8	
Percent Similarity:	87.50		Percent Identity:	62.50	
Total Similarity:	87.50		Total Identity:	62.50	
Gaps:	0				

Alignment:

31	ArgSerGlyLeuGlyGlyAlaPro	38
:	:	
242	AGGAGGGGTGGGGGCGACACCC	219

Sequence name: rnpb2ndb:US-09-794-925-27

Sequence documentation:

; Sequence 27, Application US/09794925

Patent No. US20020064819A1

; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/62801H  
; CURRENT APPLICATION NUMBER: US/09/794,925  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 27  
; LENGTH: 1278  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
; US-09-794-925-27

Alignment of: us-10-726-967a-1 x US-09-794-925-27 ..

Alignment segment 1/1: (-)

	Quality:	26.00		Score:	373
Matching length:	8		Total length:	8	
Percent Similarity:	87.50		Percent Identity:	62.50	
Total Similarity:	87.50		Total Identity:	62.50	
Gaps:	0				

Alignment:

31	ArgSerGlyLeuGlyGlyAlaPro	38
:	:	
242	AGGAGGGGTGGGGGCGACACCC	219

Sequence name: rnpb2ndb:US-09-681-442-27

Sequence documentation:

; Sequence 27, Application US/09681442  
; Patent No. US20020081634A1  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrichson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; TITLE OF INVENTION: THEREFOR  
; FILE REFERENCE: 28341/6280FG  
; CURRENT APPLICATION NUMBER: US/09/681,442  
; CURRENT FILING DATE: 2001-04-05  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 27  
; LENGTH: 1278  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-681-442-27

Alignment of: us-10-726-967a-1 x US-09-681-442-27 ..

Alignment segment 1/1: (-)

Matching length:	26.00	Escore:	373
Matching Percent Similarity:	8	Total length:	8
Total Percent Similarity:	87.50	Matching Percent Identity:	62.50
Gaps:	0	Total Percent Identity:	62.50

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro 38  
||||:|||||:|||||:|||||: 219  
242 AGGAAGGGGTGGGGGCGACGACCC

Sequence name: rnpb2ndb:US-09-869-414-27

Sequence documentation:

Sequence 27, Application US/09869414  
Publication No. US20030077226A1  
GENERAL INFORMATION:  
APPLICANT: Bienkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M  
CURRENT APPLICATION NUMBER: US/09/869,414  
PRIOR FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 27  
LENGTH: 1278  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-869-414-27

Alignment of: us-10-726-967a-1 x US-09-869-414-27 ..

Alignment segment 1/1: (-)

Matching length:	26.00	Escore:	373
Matching Percent Similarity:	8	Total length:	8
Total Percent Similarity:	87.50	Matching Percent Identity:	62.50
Gaps:	0	Total Percent Identity:	62.50

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro 38  
||||:|||||:|||||:|||||: 219  
242 AGGAAGGGGTGGGGGCGACGACCC

Sequence name: rnpb2ndb:US-09-548-366-27

Sequence documentation:

Sequence 27, Application US/09548366

Publication No. US20030104365A1  
GENERAL INFORMATION:

APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Van, Riddang

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND  
FILE REFERENCE: 28341/6280A

CURRENT APPLICATION NUMBER: US/09/548,366  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 65  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 27  
LENGTH: 1278  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-366-27

Alignment of: us-10-726-967a-1 x US-09-548-366-27 ..

Alignment segment 1/1: (-)

Matching length:	26.00	Escore:	373
Matching Percent Similarity:	8	Total length:	8
Total Percent Similarity:	87.50	Matching Percent Identity:	62.50
Gaps:	0	Total Percent Identity:	62.50

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro 38  
||||:|||||:|||||:|||||: 219  
242 AGGAAGGGGTGGGGGCGACGACCC

Sequence name: rnpb2ndb:US-10-652-927-27

Sequence documentation:

Sequence 27, Application US/10652927  
Publication No. US20040043408A1  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N3  
CURRENT APPLICATION NUMBER: US/10/652,927  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: 09/794,925  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 27  
LENGTH: 1278  
TYPE: DNA

ORGANISM: Homo sapiens  
US-10-652-927-27

Alignment of: us-10-726-967a-1 x US-10-652-927-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	373
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerglyLeuGlyGlyAlaPro 38  
|||::||| |||::||| |||  
242 AGGAAGGGGTGGGGGACAGCACCC 219

Sequence name: rnpbp2ndb:US-10-652-830-27

Sequence documentation:

Sequence 27, Application US/10652830  
Publication No. US20040048303A1  
GENERAL INFORMATION:

APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280N1  
CURRENT FILING DATE: 2003-08-29  
PRIOR APPLICATION NUMBER: US/10/652,830  
PRIOR FILING DATE: 2001-02-27  
PRIOR FILING DATE: 1999-09-23  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 27  
LENGTH: 1278  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-652-830-27

Alignment of: us-10-726-967a-1 x US-10-652-830-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	373
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerglyLeuGlyGlyAlaPro 38  
|||::||| |||::||| |||  
242 AGGAAGGGGTGGGGGACAGCACCC 219

Sequence name: rnpbp2ndb:US-10-652-045-27

Sequence documentation:

Sequence 27, Application US/10652045  
Publication No. US20040166507A1  
GENERAL INFORMATION:

APPLICANT: Gurney et al.

TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

FILE REFERENCE: 29915/6280N2

CURRENT APPLICATION NUMBER: US/10/652,045

CURRENT FILING DATE: 2003-08-29

PRIOR APPLICATION NUMBER: 09/794,925

PRIOR FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 74

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 27

LENGTH: 1278

TYPE: DNA

ORGANISM: Homo sapiens

US-10-652-045-27

Alignment of: us-10-726-967a-1 x US-10-652-045-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	373
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerglyLeuGlyGlyAlaPro 38  
|||::||| |||::||| |||  
242 AGGAAGGGGTGGGGGACAGCACCC 219

Sequence name: rnpbp2ndb:US-10-476-935-27

Sequence documentation:

Sequence 27, Application US/10476935  
Publication No. US20040234976A1  
GENERAL INFORMATION:

APPLICANT: Benkowski et al.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

FILE REFERENCE: 28341/6280M1

CURRENT APPLICATION NUMBER: US/10/476,935

CURRENT FILING DATE: 2003-11-06

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 27

LENGTH: 1278

TYPE: DNA

ORGANISM: Homo sapiens

US-10-476-935-27

Alignment of: us-10-726-967a-1 x US-10-476-935-27 ..

## Alignment segment 1/1: (-)

Quality:	26.00	Escore:	373
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50

## Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
|||::||| |||::||| |||  
242 AGGAAGGGGTGGGGGCGACGCC

38  
219

## Sequence name: rnpb2ndb:US-10-940-867-27

## Sequence documentation:

Sequence 27, Application US/10940867  
Publication No. US20050026256A1  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Ridgway  
APPLICANT: Pharmacia & Upjohn Company  
TITLE OF INVENTION: Alzheimer's Disease Secretase  
FILE REFERENCE: 6177, PCPA  
CURRENT APPLICATION NUMBER: US/10/940,867  
CURRENT FILING DATE: 2004-09-14  
PRIOR APPLICATION NUMBER: US 09/806,194  
PRIOR FILING DATE: 2001-03-26  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 49  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 27  
LENGTH: 1278  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-940-867-27

## Alignment of: us-10-726-967a-1 x US-10-940-867-27 ..

## Alignment segment 1/1: (-)

Quality:	26.00	Escore:	373
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50

## Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
|||::||| |||::||| |||  
242 AGGAAGGGGTGGGGGCGACGCC

38  
219

## Sequence name: rnpb2ndb:US-10-477-076-27

## Sequence documentation:

Sequence 27, Application US/10477076  
Publication No. US20050080232A1  
GENERAL INFORMATION:  
APPLICANT: Beinowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M2  
CURRENT APPLICATION NUMBER: US/10/477,076  
CURRENT FILING DATE: 2003-11-06  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 27  
LENGTH: 1278  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-477-076-27

## Alignment of: us-10-726-967a-1 x US-10-477-076-27 ..

## Alignment segment 1/1: (-)

Quality:	26.00	Escore:	373
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50

## Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
|||::||| |||::||| |||  
242 AGGAAGGGGTGGGGGCGACGCC

38  
219

## Sequence name: rnpb2ndb:US-10-372-473-8

## Sequence documentation:

Sequence 8, Application US/10372473  
Publication No. US20040005691A1  
GENERAL INFORMATION:  
APPLICANT: Chou, Kuo-Chen  
APPLICANT: Howe, W. Jeffery  
TITLE OF INVENTION: Modified BACE  
FILE REFERENCE: MBHB 01-1766-A  
CURRENT APPLICATION NUMBER: US/10/372,473  
CURRENT FILING DATE: 2003-02-21  
NUMBER OF SEQ ID NOS: 24  
SOFTWARE: PatentIn version 3.2  
SEQ ID NO 8  
LENGTH: 1365  
TYPE: DNA  
ORGANISM: Homo sapiens  
FEATURE:  
NAME/KEY: misc feature  
OTHER INFORMATION: DNA sequence of recombinant human BACE with P33K mutation from E.  
US-10-372-473-8

## Alignment of: us-10-726-967a-1 x US-10-372-473-8 ..

## Alignment segment 1/1: (-)

Quality:	26.00	Escore:	374
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50

## Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
|||::||| |||::||| |||  
332 AGGAAGGGGTGGGGGCGACGCC

38  
309

## Sequence name: rnpb2ndb:US-10-627-473-9

## Sequence documentation:

Sequence 9, Application US/10627473  
Publication No. US20040096950A1  
GENERAL INFORMATION:  
APPLICANT: VUILLARD, LAURENT MICHEL MARIE  
APPLICANT: PATEL, SAHIL JOE  
APPLICANT: YON, JEFFREY ROLAND  
APPLICANT: CLEASBY, ANNE  
APPLICANT: HAMILTON, BRUCE JOHN  
APPLICANT: SHAH, ALBEM  
TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME  
FILE REFERENCE: 674553-2002.1  
CURRENT APPLICATION NUMBER: US/10/627,473  
CURRENT FILING DATE: 2003-07-25  
PRIOR APPLICATION NUMBER: 60/398,681  
PRIOR FILING DATE: 2002-07-26  
NUMBER OF SEQ ID NOS: 46  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 9  
LENGTH: 1365  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-627-473-9

Alignment of: us-10-726-967a-1 x US-10-627-473-9 ..

	Quality:	26.00		Score:	374
Matching length:	8		Total length:	8	
Matching Percent Similarity:	87.50		Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50		Total Percent Identity:	62.50	
Gaps:	0				

## Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
|||::|||::|||::|||  
329 AGGAAGGGGTGGGGGACACCC

38  
306

Sequence name: rnpb2ndb:US-10-627-473-5

## Sequence documentation:

Sequence 5, Application US/10627473  
Publication No. US20040096950A1  
GENERAL INFORMATION:  
APPLICANT: VUILLARD, LAURENT MICHEL MARIE  
APPLICANT: PATEL, SAHIL JOE  
APPLICANT: YON, JEFFREY ROLAND  
APPLICANT: CLEASBY, ANNE  
APPLICANT: HAMILTON, BRUCE JOHN  
APPLICANT: SHAH, ALBEM  
TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME  
FILE REFERENCE: 674553-2002.1  
CURRENT APPLICATION NUMBER: US/10/627,473  
CURRENT FILING DATE: 2003-07-25  
PRIOR APPLICATION NUMBER: 60/398,681  
PRIOR FILING DATE: 2002-07-26  
NUMBER OF SEQ ID NOS: 46  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 5  
LENGTH: 1368  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-627-473-5

Alignment of: us-10-726-967a-1 x US-10-627-473-5 ..

	Quality:	26.00		Score:	374
Matching length:	8		Total length:	8	
Matching Percent Similarity:	87.50		Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50		Total Percent Identity:	62.50	
Gaps:	0				

## Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
|||::|||::|||::|||  
332 AGGAAGGGGTGGGGGACACCC

38  
309

Sequence name: rnpb2ndb:US-10-627-473-13

## Sequence documentation:

Sequence 13, Application US/10627473  
Publication No. US20040096950A1  
GENERAL INFORMATION:  
APPLICANT: VUILLARD, LAURENT MICHEL MARIE  
APPLICANT: PATEL, SAHIL JOE  
APPLICANT: YON, JEFFREY ROLAND  
APPLICANT: CLEASBY, ANNE  
APPLICANT: HAMILTON, BRUCE JOHN  
APPLICANT: SHAH, ALBEM  
TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME  
FILE REFERENCE: 674553-2002.1  
CURRENT APPLICATION NUMBER: US/10/627,473  
CURRENT FILING DATE: 2003-07-25  
PRIOR APPLICATION NUMBER: 60/398,681  
PRIOR FILING DATE: 2002-07-26  
NUMBER OF SEQ ID NOS: 46  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 13  
LENGTH: 1368  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-10-627-473-13

Alignment of: us-10-726-967a-1 x US-10-627-473-13 ..

Alignment segment 1/1: (-)

	Quality:	26.00		Score:	374
Matching length:	8		Total length:	8	
Matching Percent Similarity:	87.50		Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50		Total Percent Identity:	62.50	
Gaps:	0				

## Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
|||::|||::|||::|||  
332 AGGAAGGGGTGGGGGACACCC

38  
309

Sequence name: rnpb2ndb:US-10-627-473-17

## Sequence documentation:

Sequence 17, Application US/10627473  
Publication No. US20040096950A1  
GENERAL INFORMATION:  
APPLICANT: VUILLARD, LAURENT MICHEL MARIE  
APPLICANT: PATEL, SAHIL JOE  
APPLICANT: YON, JEFFREY ROLAND  
APPLICANT: CLEASBY, ANNE  
APPLICANT: HAMILTON, BRUCE JOHN  
APPLICANT: SHAH, ALBEM  
TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME  
FILE REFERENCE: 674553-2002.1  
CURRENT APPLICATION NUMBER: US/10/627,473  
CURRENT FILING DATE: 2003-07-25  
PRIOR APPLICATION NUMBER: 60/398,681

;; PRIOR FILING DATE: 2002-07-26  
;; NUMBER OF SEQ ID NOS: 46  
;; SOFTWARE: PatentIn Ver. 2.1  
;; SEQ ID NO: 17  
;; LENGTH: 1383  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-10-627-473-17

Alignment of: us-10-726-967a-1 x US-10-627-473-17 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	374
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
|||::||| |||::|||  
329 AGGAAGGGGTGGGGGCGACACCC

38  
306

Sequence name: rnpbp2ndb:US-10-627-473-11

Sequence documentation:

;; Sequence 11, Application US/10627473  
;; Publication No. US20040096950A1  
;; GENERAL INFORMATION:  
;; APPLICANT: VUILLARD, LAURENT MICHEL MARIE  
;; APPLICANT: PATEL, SAHIL JOE  
;; APPLICANT: YON, JEFFREY ROLAND  
;; APPLICANT: CLEASBY, ANNE  
;; APPLICANT: HAMILTON, BRUCE JOHN  
;; APPLICANT: SHAH, ALEEM  
;; TITLE OF INVENTION: CRYSTAL STRUCTURE OF BETA SITE APP CLEAVING ENZYME  
;; TITLE OF INVENTION: (BASE) AND METHODS OF USE THEREOF  
;; FILE REFERENCE: 674553-2002.1  
;; CURRENT APPLICATION NUMBER: US/10/627,473  
;; CURRENT FILING DATE: 2003-07-25  
;; PRIOR APPLICATION NUMBER: 60/398,681  
;; PRIOR FILING DATE: 2002-07-26  
;; NUMBER OF SEQ ID NOS: 46  
;; SOFTWARE: PatentIn Ver. 2.1  
;; SEQ ID NO: 11  
;; LENGTH: 1386  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-10-627-473-11

Alignment of: us-10-726-967a-1 x US-10-627-473-11 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	374
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
|||::||| |||::|||  
332 AGGAAGGGGTGGGGGCGACACCC

38  
309

Sequence name: rnpbp2ndb:US-09-969-671A-3

Sequence documentation:

;; Sequence 3, Application US/09969671A  
;; Publication No. US20030036112A1

;; GENERAL INFORMATION:

;; APPLICANT: CHAPMAN, CONRAD G.  
;; APPLICANT: MURPHY, KAY  
;; APPLICANT: POWELL, DAVID J.  
;; APPLICANT: SMITH, TRUDI S.  
;; TITLE OF INVENTION: ASP2  
;; FILE REFERENCE: GH-70368-D1  
;; CURRENT APPLICATION NUMBER: US/09/969,671A  
;; CURRENT FILING DATE: 2001-10-03  
;; PRIOR APPLICATION NUMBER: UK 9701684.4  
;; PRIOR FILING DATE: 1997-01-28  
;; PRIOR APPLICATION NUMBER: 09/009,191  
;; PRIOR FILING DATE: 1998-01-20  
;; PRIOR APPLICATION NUMBER: 09/694,200  
;; PRIOR FILING DATE: 2000-10-23  
;; NUMBER OF SEQ ID NOS: 6  
;; SOFTWARE: FastSeq for Windows Version 4.0  
;; SEQ ID NO: 3  
;; LENGTH: 2370  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
;; FEATURE:  
;; NAME/KEY:  
;; LOCATION: (2284) (2285) (2292) (2307) (2309) (2326) (2336) (2338) (2341) (2345)  
;; LOCATION: (2349) (2351) (2354) (2358) (2369) (2369)  
;; OTHER INFORMATION: wherein n can be represented by a, c, t, or g  
US-09-969-671A-3

Alignment of: us-10-726-967a-1 x US-09-969-671A-3 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	379
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
|||::||| |||::|||  
155 AGGAAGGGGTGGGGGCGACACCC

38  
132

Sequence name: rnpbp2ndb:US-10-308-365-3

Sequence documentation:

;; Sequence 3, Application US/10308365  
;; Publication No. US20030109022A1  
;; GENERAL INFORMATION:  
;; APPLICANT: CHAPMAN, CONRAD G.  
;; APPLICANT: MURPHY, KAY  
;; APPLICANT: POWELL, DAVID J.  
;; APPLICANT: SMITH, TRUDI S.  
;; TITLE OF INVENTION: ASP 2  
;; FILE REFERENCE: GH-70368-2  
;; CURRENT APPLICATION NUMBER: US/10/308,365  
;; CURRENT FILING DATE: 2002-12-03  
;; PRIOR APPLICATION NUMBER: US/09/694,200  
;; PRIOR FILING DATE: 2000-10-23  
;; PRIOR APPLICATION NUMBER: UK 9701684.4  
;; PRIOR FILING DATE: 1997-01-28  
;; PRIOR APPLICATION NUMBER: 09/009,191  
;; PRIOR FILING DATE: 1998-01-20  
;; NUMBER OF SEQ ID NOS: 6  
;; SOFTWARE: FastSeq for Windows Version 3.0  
;; SEQ ID NO: 3  
;; LENGTH: 2370  
;; TYPE: DNA  
;; ORGANISM: HOMO SAPIENS  
;; FEATURE: FEATURE: MISCELLANEOUS FEATURE  
;; NAME/KEY: UNSURE  
;; LOCATION: (2284) (2285) (2292) (2307) (2309) (2326) (2336) (2338) (2341) (2345)



LOCATION: (2349) (2351) (2354) (2358) (2368) (2369)  
OTHER INFORMATION: OTHER INFORMATION: n= a, g, c or t  
US-10-308-365-3

Alignment of: us-10-726-967a-1 x US-10-308-365-3 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	379
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31	ArgSerGlyLeuGlyGlyAlaPro	38
155	AGGAAGGGGTGGGGGCAACACCC	132

Sequence name: rnpb2ndb:US-10-829-717-3

Sequence documentation:

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; Sequence 3, Application US/10829717
; Publication No. US20050101556A1
; GENERAL INFORMATION:
; APPLICANT: CHAPMAN, CONRAD G.
; APPLICANT: MURPHY, KAY
; APPLICANT: POWELL, DAVID J.
; APPLICANT: SMITH, TRUDI S.
; TITLE OF INVENTION: ASP 2
; FILE REFERENCE: GH-70368-2
; CURRENT APPLICATION NUMBER: US/10/829,717
; CURRENT FILING DATE: 2004-04-22
; PRIOR APPLICATION NUMBER: US/10/308,365
; PRIOR FILING DATE: 2002-12-03
; PRIOR APPLICATION NUMBER: US/09/694,200
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: UK 9701684.4
; PRIOR FILING DATE: 1997-01-28
; PRIOR APPLICATION NUMBER: 09/009,191
; PRIOR FILING DATE: 1998-01-20
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: PatsSeq for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 2370
; TYPE: DNA
; ORGANISM: HOMO SAPIENS
; FEATURE: FEATURE: MISCELLANEOUS FEATURE
; NAME/KEY: UNSURE
; LOCATION: (2284) (2285) (2292) (2307) (2309) (2326) (2336) (2338) (2341) (2345)
; LOCATION: (2349) (2351) (2354) (2358) (2368) (2369)
; OTHER INFORMATION: OTHER INFORMATION: n= a, g, c or t
US-10-829-717-3
    
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Alignment of: us-10-726-967a-1 x US-10-829-717-3 ..

Alignment segment 1/1: (-)

Quality:	26.00	Escore:	379
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31	ArgSerGlyLeuGlyGlyAlaPro	38
155	AGGAAGGGGTGGGGGCAACACCC	132

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rn1p2ndb:US-09-471-669A-44 +	104.00	62.09	34.82	2348	Sequence 44, Application US/
rn1p2ndb:US-09-009-191-1 +	104.00	62.00	35.19	2541	Sequence 1, Application US/
rn1p2ndb:US-09-604-608-1 +	104.00	61.73	36.34	3252	Sequence 1, Application US/
rn1p2ndb:US-09-949-016-4382 +	104.00	61.10	39.22	5825	Sequence 4382, Application US/
rn1p2ndb:US-09-949-016-939 +	104.00	61.09	39.27	5878	Sequence 939, Application US/
rn1p2ndb:US-09-724-566A-48 +	104.00	59.99	44.75	16080	Sequence 48, Application US/
rn1p2ndb:US-09-699-471-669A-48 +	104.00	59.99	44.75	16080	Sequence 48, Application US/
rn1p2ndb:US-09-713-158-1 +	77.00	54.59	82.96	15061	Sequence 1, Application US/
rn1p2ndb:US-09-548-372D-7 +	77.00	54.26	86.02	2043	Sequence 7, Application US/
rn1p2ndb:US-09-548-367D-7 +	77.00	54.26	86.02	2043	Sequence 7, Application US/
rn1p2ndb:US-09-551-853D-7 +	77.00	54.26	86.02	2043	Sequence 7, Application US/
rn1p2ndb:US-09-416-901B-7 +	77.00	54.26	86.02	2043	Sequence 7, Application US/
rn1p2ndb:US-09-548-372D-7 +	77.00	54.26	86.02	2043	Sequence 7, Application US/
rn1p2ndb:US-09-794-927A-7 +	77.00	54.26	86.02	2043	Sequence 7, Application US/
rn1p2ndb:US-09-548-372D-7 +	77.00	54.26	86.02	2043	Sequence 7, Application US/
rn1p2ndb:US-09-795-847B-7 +	77.00	54.26	86.02	2043	Sequence 7, Application US/
rn1p2ndb:US-09-869-414-7 +	77.00	54.26	86.02	2043	Sequence 7, Application US/
rn1p2ndb:US-09-548-366F-7 +	77.00	54.26	86.02	2043	Sequence 7, Application US/
rn1p2ndb:US-09-548-368D-7 +	77.00	54.26	86.02	2043	Sequence 7, Application US/
rn1p2ndb:US-09-794-925A-7 +	77.00	54.26	86.02	2043	Sequence 7, Application US/
rn1p2ndb:US-09-806-194A-7 +	77.00	54.26	86.02	2043	Sequence 7, Application US/
rn1p2ndb:US-09-724-566A-42 -	38.00	42.59	237.43	2348	Sequence 42, Application US/
rn1p2ndb:US-09-471-669A-42 -	38.00	42.59	237.43	2348	Sequence 42, Application US/
rn1p2ndb:US-09-471-669A-44 -	38.00	42.59	237.43	2348	Sequence 42, Application US/
rn1p2ndb:US-09-471-669A-48 -	38.00	42.59	237.43	2348	Sequence 42, Application US/
rn1p2ndb:US-09-949-016-939 -	35.00	40.72	261.11	5825	Sequence 939, Application US/
rn1p2ndb:US-09-724-566A-48 -	35.00	39.61	273.10	16080	Sequence 48, Application US/
rn1p2ndb:US-09-471-669A-48 -	35.00	39.61	273.10	16080	Sequence 48, Application US/
rn1p2ndb:US-09-548-372D-50 -	32.00	41.47	251.98	1287	Sequence 50, Application US/
rn1p2ndb:US-09-548-367D-50 -	32.00	41.47	251.98	1287	Sequence 50, Application US/
rn1p2ndb:US-09-551-853D-50 -	32.00	41.47	251.98	1287	Sequence 50, Application US/
rn1p2ndb:US-09-416-901B-50 -	32.00	41.47	251.98	1287	Sequence 50, Application US/
rn1p2ndb:US-09-548-372D-50 -	32.00	41.47	251.98	1287	Sequence 50, Application US/
rn1p2ndb:US-09-794-927A-50 -	32.00	41.47	251.98	1287	Sequence 50, Application US/
rn1p2ndb:US-09-548-372D-50 -	32.00	41.47	251.98	1287	Sequence 50, Application US/
rn1p2ndb:US-09-795-847B-50 -	32.00	41.47	251.98	1287	Sequence 50, Application US/
rn1p2ndb:US-09-869-414-50 -	32.00	41.47	251.98	1287	Sequence 50, Application US/
rn1p2ndb:US-09-548-366F-50 -	32.00	41.47	251.98	1287	Sequence 50, Application US/
rn1p2ndb:US-09-548-368D-50 -	32.00	41.47	251.98	1287	Sequence 50, Application US/
rn1p2ndb:US-09-794-925A-50 -	32.00	41.47	251.98	1287	Sequence 50, Application US/
rn1p2ndb:US-09-806-194A-50 -	32.00	41.47	251.98	1287	Sequence 50, Application US/
rn1p2ndb:US-09-548-372D-25 -	32.00	41.46	252.14	1302	Sequence 25, Application US/
rn1p2ndb:US-09-548-367D-25 -	32.00	41.46	252.14	1302	Sequence 25, Application US/
rn1p2ndb:US-09-551-853D-25 -	32.00	41.46	252.14	1302	Sequence 25, Application US/
rn1p2ndb:US-09-416-901B-25 -	32.00	41.46	252.14	1302	Sequence 25, Application US/
rn1p2ndb:US-09-548-372D-25 -	32.00	41.46	252.14	1302	Sequence 25, Application US/
rn1p2ndb:US-09-794-927A-25 -	32.00	41.46	252.14	1302	Sequence 25, Application US/
rn1p2ndb:US-09-548-372D-25 -	32.00	41.46	252.14	1302	Sequence 25, Application US/
rn1p2ndb:US-09-795-847B-25 -	32.00	41.46	252.14	1302	Sequence 25, Application US/
rn1p2ndb:US-09-869-414-25 -	32.00	41.46	252.14	1302	Sequence 25, Application US/
rn1p2ndb:US-09-548-366F-25 -	32.00	41.46	252.14	1302	Sequence 25, Application US/
rn1p2ndb:US-09-548-368D-25 -	32.00	41.46	252.14	1302	Sequence 25, Application US/
rn1p2ndb:US-09-794-925A-25 -	32.00	41.46	252.14	1302	Sequence 25, Application US/
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rn1p2ndb:US-09-548-372D-52 -	32.00	41.46	252.17	1305	Sequence 52, Application US/
rn1p2ndb:US-09-548-367D-52 -	32.00	41.46	252.17	1305	Sequence 52, Application US/
rn1p2ndb:US-09-551-853D-52 -	32.00	41.46	252.17	1305	Sequence 52, Application US/
rn1p2ndb:US-09-416-901B-52 -	32.00	41.46	252.17	1305	Sequence 52, Application US/
rn1p2ndb:US-09-548-372D-52 -	32.00	41.46	252.17	1305	Sequence 52, Application US/
rn1p2ndb:US-09-794-927A-52 -	32.00	41.46	252.17	1305	Sequence 52, Application US/
rn1p2ndb:US-09-548-372D-52 -	32.00	41.46	252.17	1305	Sequence 52, Application US/
rn1p2ndb:US-09-795-847B-52 -	32.00	41.46	252.17	1305	Sequence 52, Application US/
rn1p2ndb:US-09-869-414-52 -	32.00	41.46	252.17	1305	Sequence 52, Application US/
rn1p2ndb:US-09-548-366F-52 -	32.00	41.46	252.17	1305	Sequence 52, Application US/
rn1p2ndb:US-09-548-368D-52 -	32.00	41.46	252.17	1305	Sequence 52, Application US/
rn1p2ndb:US-09-794-925A-52 -	32.00	41.46	252.17	1305	Sequence 52, Application US/
rn1p2ndb:US-09-806-194A-52 -	32.00	41.46	252.17	1305	Sequence 52, Application US/
rn1p2ndb:US-09-548-372D-21 -	32.00	41.43	252.54	1341	Sequence 21, Application US/
rn1p2ndb:US-09-548-367D-21 -	32.00	41.43	252.54	1341	Sequence 21, Application US/
rn1p2ndb:US-09-551-853D-21 -	32.00	41.43	252.54	1341	Sequence 21, Application US/
rn1p2ndb:US-09-416-901B-21 -	32.00	41.43	252.54	1341	Sequence 21, Application US/
rn1p2ndb:US-09-548-372D-21 -	32.00	41.43	252.54	1341	Sequence 21, Application US/
rn1p2ndb:US-09-794-927A-21 -	32.00	41.43	252.54	1341	Sequence 21, Application US/
rn1p2ndb:US-09-548-372D-21 -	32.00	41.43	252.54	1341	Sequence 21, Application US/
rn1p2ndb:US-09-794-927A-21 -	32.00	41.43	252.54	1341	Sequence 21, Application US/
rn1p2ndb:US-09-548-372D-21 -	32.00	41.43	252.54	1341	Sequence 21, Application US/

[illegible]

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US-09-548-372D-50
Alignment of: us-10-726-967a-1 x US-09-548-372D-50
Alignment segment 1/1: (+)
      Quality: 104.00      Score: 32.2
      Matching length: 20      Total length: 20
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0
Alignment:
22 ThrGlnHisGlyTleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGACCGGATCCGGCTGCCCTCGCAGCGGCGCTGGGGGGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCGGGGGCTG 123

Sequence name: rnp2ndb:US-09-548-367D-50
Sequence documentation:
; Sequence 50, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEROF
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-548-367D-50
Alignment of: us-10-726-967a-1 x US-09-548-367D-50
Alignment segment 1/1: (+)
      Quality: 104.00      Score: 32.2
      Matching length: 20      Total length: 20
      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0
Alignment:
22 ThrGlnHisGlyTleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGACCGGATCCGGCTGCCCTCGCAGCGGCGCTGGGGGGCCCC 113
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38 oleuGlyLeu 41
|||||
114 CCGGGGGCTG 123

Sequence name: rnp2ndb:US-09-551-853D-50

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Sequence documentation:
; Sequence 50, Application US/09551853D
; Patent No. 650667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT APPLICATION NUMBER: US/09/551,853D
; PRIOR FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Aep2(b) delta TM
US-09-551-853D-50

Alignment of: us-10-726-967a-1 x US-09-551-853D-50 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Total length: 32.2
      Matching length: 20      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

Alignment:
22 ThrGlnHtsglyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCTCCCTGGCGACGGGCTGGGGGGCGCCCC 113
38 OleuGlyLeu 41
114 CCGGGGGCTG 123

Sequence name: rnp2ndb:US-09-416-901B-50

Sequence documentation:
; Sequence 50, Application US/09416901B
; Patent No. 6699671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/416,901B
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 50
; LENGTH: 1287
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; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Aep2(b) delta TM
US-09-416-901B-50

Alignment of: us-10-726-967a-1 x US-09-416-901B-50 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Total length: 32.2
      Matching length: 20      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

Alignment:
22 ThrGlnHtsglyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCTCCCTGGCGACGGGCTGGGGGGCGCCCC 113
38 OleuGlyLeu 41
114 CCGGGGGCTG 123

Sequence name: rnp2ndb:US-09-548-376D-50

Sequence documentation:
; Sequence 50, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; FILE REFERENCE: 29915/6280F
; CURRENT APPLICATION NUMBER: US/09/548,376D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Aep2(b) delta TM
US-09-548-376D-50

Alignment of: us-10-726-967a-1 x US-09-548-376D-50 ..

Alignment segment 1/1: (+)

      Quality: 104.00      Total length: 32.2
      Matching length: 20      Matching Percent Identity: 100.00
      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
      Gaps: 0

Alignment:
22 ThrGlnHtsglyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCTCCCTGGCGACGGGCTGGGGGGCGCCCC 113
```

38 0leug1yleu 41  
|||||  
114 CCGGGGCTG 123

Sequence name: rni2ndb:US-09-794-927A-50

Sequence documentation:

; Sequence 50, Application US/09794927A

; Patent No. 6727074

; GENERAL INFORMATION:

; APPLICANT: Gurney et al.

; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

; FILE REFERENCE: 29915/6280R3

; CURRENT APPLICATION NUMBER: US/09/794,927A

; PRIOR FILING DATE: 2001-02-27

; PRIOR APPLICATION NUMBER: 09/416,901

; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 74

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 50

; LENGTH: 1287

; TYPE: DNA

; ORGANISM: Artificial sequence

; FEATURE:

; OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-794-927A-50

Alignment of: us-10-726-967a-1 x US-09-794-927A-50 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.2
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	

Alignment:

22 ThrGlnHsGlyLeuArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCGACGCGATCGGCTGCGCTGCGACGCGGCTGGGGGGGCCCC 113  
38 0leug1yleu 41  
|||||  
114 CCGGGGCTG 123

Sequence name: rni2ndb:US-09-548-373D-50

Sequence documentation:

; Sequence 50, Application US/09548373D

; Patent No. 6737510

; GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

; FILE REFERENCE: 29915/6280R3

; CURRENT APPLICATION NUMBER: US/09/548,373D

; PRIOR FILING DATE: 2000-04-12

; PRIOR APPLICATION NUMBER: US 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 50  
; LENGTH: 1287

; TYPE: DNA

; ORGANISM: Artificial sequence

; FEATURE:

; OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-548-373D-50

Alignment of: us-10-726-967a-1 x US-09-548-373D-50 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.2
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	

Alignment:

22 ThrGlnHsGlyLeuArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCGACGCGATCGGCTGCGCTGCGACGCGGCTGGGGGGGCCCC 113  
38 0leug1yleu 41  
|||||  
114 CCGGGGCTG 123

Sequence name: rni2ndb:US-09-795-847B-50

Sequence documentation:

; Sequence 50, Application US/09795847B

; Patent No. 6753163

; GENERAL INFORMATION:

; APPLICANT: Gurney, Mark E.

; APPLICANT: Blenkowski, Michael J.

; APPLICANT: Heinrichson, Robert L.

; APPLICANT: Parodi, Luis A.

; APPLICANT: Van, Ridgand

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

; FILE REFERENCE: 28341/6280R3

; CURRENT APPLICATION NUMBER: US/09/795,847B

; PRIOR FILING DATE: 2001-02-28

; PRIOR APPLICATION NUMBER: 09/416,901

; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 74

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 50

; LENGTH: 1287

; TYPE: DNA

; ORGANISM: Artificial sequence

; FEATURE:

; OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-795-847B-50

Alignment of: us-10-726-967a-1 x US-09-795-847B-50 ..

Alignment segment 1/1: (+)

Quality: 104.00      EScore: 32.2  
Matching length: 20      Total length: 20  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
Gaps: 0

Alignment:

```
22 Thrglnhieglylleargleuproleuargserglyleuglygla1apr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTCGCAGCGCCTGGGGGCGCCCC 113
|||||
38 oleuglyleu
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rni2ndb:US-09-869-414-50

Sequence documentation:

```
; Sequence 50, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; PRIORITY FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)
US-09-869-414-50
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Alignment of: us-10-726-967a-1 x US-09-869-414-50 ..

Alignment segment 1/1: (+)

	Quality:	104.00		EScore:	32.2
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 Thrglnhieglylleargleuproleuargserglyleuglygla1apr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTCGCAGCGCCTGGGGGCGCCCC 113
|||||
38 oleuglyleu
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rni2ndb:US-09-548-366F-50

Sequence documentation:

; Sequence 50, Application US/09548366F

```
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280J
; CURRENT APPLICATION NUMBER: US/09/548,366F
; PRIORITY FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-09-548-366F-50
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Alignment of: us-10-726-967a-1 x US-09-548-366F-50 ..

Alignment segment 1/1: (+)

	Quality:	104.00		EScore:	32.2
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 Thrglnhieglylleargleuproleuargserglyleuglygla1apr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTCGCAGCGCCTGGGGGCGCCCC 113
|||||
38 oleuglyleu
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rni2ndb:US-09-548-368D-50

Sequence documentation:

```
; Sequence 50, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; PRIORITY FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
```



OTHER INFORMATION: Hu-Aep2(b) delta TM  
US-09-548-368D-50

Alignment of: us-10-726-967a-1 x US-09-548-368D-50 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLys 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-794-925A-50

Sequence documentation:

```
; Sequence 50, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 29915/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Aep2(b) delta TM
US-09-794-925A-50
```

Alignment of: us-10-726-967a-1 x US-09-794-925A-50 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLys 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
```

114 CTGGGGGCTG

123

Sequence name: rni2ndb:US-09-548-372D-25

Sequence documentation:

```
; Sequence 25, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 25
; LENGTH: 1302
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-372D-25
```

Alignment of: us-10-726-967a-1 x US-09-548-372D-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLys 38
|||||
4 ACTGACGATGTAATCGTCTGCCACTGCGTACGCGTGGGGTGTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGTCTG 63
```

Sequence name: rni2ndb:US-09-548-367D-25

Sequence documentation:

```
; Sequence 25, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 25
```

LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-367D-25

Alignment of: us-10-726-967a-1 x US-09-548-367D-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	32.2
Matching length:	20		20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
4 ACTCAGCATGTATTGCTCTGCCACTGCGTAGCGGCTGTGGGTGCTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGCTCTG 63
```

Sequence name: rni2ndb:US-09-551-853D-25

Sequence documentation:

Sequence 25, Application US/09551853D  
Patent No. 6500667  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280L  
CURRENT APPLICATION NUMBER: US/09/551,853D  
CURRENT FILING DATE: 2000-04-18  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-551-853D-25

Alignment of: us-10-726-967a-1 x US-09-551-853D-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	32.2
Matching length:	20		20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
4 ACTCAGCATGTATTGCTCTGCCACTGCGTAGCGGCTGTGGGTGCTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGCTCTG 63
```

Sequence name: rni2ndb:US-09-416-901B-25

Sequence documentation:

Sequence 25, Application US/09416901B  
Patent No. 669671  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280A  
CURRENT APPLICATION NUMBER: US/09/416,901B  
CURRENT FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-416-901B-25

Alignment of: us-10-726-967a-1 x US-09-416-901B-25 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	32.2
Matching length:	20		20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
4 ACTCAGCATGTATTGCTCTGCCACTGCGTAGCGGCTGTGGGTGCTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGCTCTG 63
```

Sequence name: rni2ndb:US-09-548-376D-25

Sequence documentation:

Sequence 25, Application US/09548376D  
Patent No. 6706485  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280F  
CURRENT APPLICATION NUMBER: US/09/548,376D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 25  
LENGTH: 1302

TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-376D-25

Alignment of: us-10-726-967a-1 x US-09-548-376D-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
4 ACTGAGCATGGTATTGCTCTGCCACTGGCTAGCGGTCTGGTGGTCTCC 53
38 OleuGlyLeu
54 ACTGGGTCTG 41
63
```

Sequence name: rn1p2ndb:US-09-794-927A-25

Sequence documentation:

Sequence 25, Application US/09794927A  
Patent No. 6727074  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280FG  
CURRENT APPLICATION NUMBER: US/09/794,927A  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-927A-25

Alignment of: us-10-726-967a-1 x US-09-794-927A-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
4 ACTGAGCATGGTATTGCTCTGCCACTGGCTAGCGGTCTGGTGGTCTCC 53
38 OleuGlyLeu
54 ACTGGGTCTG 41
63
```

Sequence name: rn1p2ndb:US-09-548-373D-25

Sequence documentation:

Sequence 25, Application US/09548373D  
Patent No. 6737510  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280B  
CURRENT APPLICATION NUMBER: US/09/548,373D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin version 3.1  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-373D-25

Alignment of: us-10-726-967a-1 x US-09-548-373D-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
4 ACTGAGCATGGTATTGCTCTGCCACTGGCTAGCGGTCTGGTGGTCTCC 53
38 OleuGlyLeu
54 ACTGGGTCTG 41
63
```

Sequence name: rn1p2ndb:US-09-795-847B-25

Sequence documentation:

Sequence 25, Application US/09795847B  
Patent No. 6753163  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heintz, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/6280B  
CURRENT APPLICATION NUMBER: US/09/795,847B  
CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23

;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 74  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 25  
;; LENGTH: 1302  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-09-795-847B-25

Alignment of: us-10-726-967a-1 x US-09-795-847B-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrglnHlglylleaArgleuProleuAArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTGAGCATGGTATTGCTGCGCACTGCGTACGCGTCTGGTGTCTCC 53
|||||
38 oleuGlyLeu 41
|||||
54 ACTGGGTCTG 63
```

Sequence name: rn1p2ndb:US-09-869-414-25

Sequence documentation:  
; Sequence 25, Application US/09869414  
; Patent No. 6790610  
; GENERAL INFORMATION:  
; APPLICANT: Beinowski et al.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
; FILE REFERENCE: 28341/6280M  
; CURRENT APPLICATION NUMBER: US/09/869,414  
; PRIOR FILING DATE: 2001-06-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/101,594  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 25  
; LENGTH: 1302  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-869-414-25

Alignment of: us-10-726-967a-1 x US-09-869-414-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrglnHlglylleaArgleuProleuAArgSerGlyLeuGlyAlaPr 38
```

```
|||||
4 ACTGAGCATGGTATTGCTGCGCACTGCGTACGCGTCTGGTGTCTCC 53
|||||
38 oleuGlyLeu 41
|||||
54 ACTGGGTCTG 63
```

Sequence name: rn1p2ndb:US-09-548-366F-25

Sequence documentation:

;; Sequence 25, Application US/09548366F  
;; Patent No. 6797487  
;; GENERAL INFORMATION:  
;; APPLICANT: GURNEY ET AL.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
;; FILE REFERENCE: 29915/6280F  
;; CURRENT APPLICATION NUMBER: US/09/548,366F  
;; PRIOR FILING DATE: 2000-04-12  
;; PRIOR APPLICATION NUMBER: US 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 60/101,594  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 25  
; LENGTH: 1302  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-548-366F-25

Alignment of: us-10-726-967a-1 x US-09-548-366F-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrglnHlglylleaArgleuProleuAArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTGAGCATGGTATTGCTGCGCACTGCGTACGCGTCTGGTGTCTCC 53
|||||
38 oleuGlyLeu 41
|||||
54 ACTGGGTCTG 63
```

Sequence name: rn1p2ndb:US-09-548-366D-25

Sequence documentation:

;; Sequence 25, Application US/09548366D  
;; Patent No. 6825023  
;; GENERAL INFORMATION:  
;; APPLICANT: GURNEY ET AL.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
;; FILE REFERENCE: 29915/6280C  
;; CURRENT APPLICATION NUMBER: US/09/548,366D  
;; PRIOR FILING DATE: 2000-04-12  
;; PRIOR APPLICATION NUMBER: US 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-368D-25

Alignment of: us-10-726-967a-1 x US-09-548-368D-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1gLy1IearGleuProleuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGATTCGTCTGCCACTGCGTAGCGGTCTGGTGTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGTCTG 63
```

Sequence name: rnp2ndb:US-09-794-925A-25

Sequence documentation:

Sequence 25, Application US/09794925A  
Patent No. 6828117  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280H  
CURRENT APPLICATION NUMBER: US/09/794,925A  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-925A-25

Alignment of: us-10-726-967a-1 x US-09-794-925A-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1gLy1IearGleuProleuArgSerGlyLeuGlyAlaPr 38
```

```
|||||
4 ACTCAGCATGATTCGTCTGCCACTGCGTAGCGGTCTGGTGTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGTCTG 63
```

Sequence name: rnp2ndb:US-09-806-194A-25

Sequence documentation:

Sequence 25, Application US/09806194A  
Patent No. 6835565  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
APPLICANT: Pharmacia & Upjohn Company  
TITLE OF INVENTION: Alzheimer's Disease Secretase  
FILE REFERENCE: 6177.P CP  
CURRENT APPLICATION NUMBER: US/09/806,194A  
CURRENT FILING DATE: 2001-09-17  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 49  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-806-194A-25

Alignment of: us-10-726-967a-1 x US-09-806-194A-25 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnH1gLy1IearGleuProleuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTCAGCATGATTCGTCTGCCACTGCGTAGCGGTCTGGTGTCTCC 53
|||||
38 OleuGlyLeu 41
|||||
54 ACTGGGTCTG 63
```

Sequence name: rnp2ndb:US-09-548-372D-52

Sequence documentation:

Sequence 52, Application US/09548372D  
Patent No. 6420534  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280T  
CURRENT APPLICATION NUMBER: US/09/548,372D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 52  
LENGTH: 1305  
TYPE: DNA  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Asp2(b) delta TM  
US-09-548-372D-52

Alignment of: us-10-726-967a-1 x US-09-548-372D-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rntp2ndb:US-09-548-367D-52

Sequence documentation:  
Sequence 52, Application US/09548367D  
Patent No. 6440698  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280H  
CURRENT APPLICATION NUMBER: US/09/548,367D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 52  
LENGTH: 1305  
TYPE: DNA  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Asp2(b) delta TM  
US-09-548-367D-52

Alignment of: us-10-726-967a-1 x US-09-548-367D-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
```

```
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rntp2ndb:US-09-551-853D-52

Sequence documentation:

Sequence 52, Application US/09551853D  
Patent No. 6500667  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280L  
CURRENT APPLICATION NUMBER: US/09/551,853D  
CURRENT FILING DATE: 2000-04-18  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 52  
LENGTH: 1305  
TYPE: DNA  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Asp2(b) delta TM  
US-09-551-853D-52

Alignment of: us-10-726-967a-1 x US-09-551-853D-52 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rntp2ndb:US-09-416-901B-52

Sequence documentation:

Sequence 52, Application US/09416901B  
Patent No. 6699671  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280A  
CURRENT APPLICATION NUMBER: US/09/416,901B  
CURRENT FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 52  
LENGTH: 1305  
TYPE: DNA  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Asp2(b) delta TM  
US-09-416-901B-52

Alignment of: us-10-726-967a-1 x US-09-416-901B-52 ..  
Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.2
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	

Alignment:

```
22 ThrglnhsglylleargleuproleuargserglyleuglyalaPr 38
|||||
64 ACCGACGCGGATCCGCTGCCCTGCGCAGCGGCGGCGGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rnp2ndb:US-09-548-376D-52

Sequence documentation:

Sequence 52, Application US/09548376D  
Patent No. 6706485  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
TITLE OF INVENTION: AND USES  
TITLE OF INVENTION: THEREOF  
FILE REFERENCE: 29915/6280P  
CURRENT APPLICATION NUMBER: US/09/548,376D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 52  
LENGTH: 1305  
TYPE: DNA  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Asp2(b) delta TM  
US-09-548-376D-52

Alignment of: us-10-726-967a-1 x US-09-548-376D-52 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.2
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	

Gaps: 0

Alignment:

```
22 ThrglnhsglylleargleuproleuargserglyleuglyalaPr 38
|||||
64 ACCGACGCGGATCCGCTGCCCTGCGCAGCGGCGGCGGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rnp2ndb:US-09-794-927A-52

Sequence documentation:

Sequence 52, Application US/09794927A  
Patent No. 6727074  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
TITLE OF INVENTION: Therefor  
FILE REFERENCE: 29915/6280FG  
CURRENT APPLICATION NUMBER: US/09/794,927A  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 52  
LENGTH: 1305  
TYPE: DNA  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Asp2(b) delta TM  
US-09-794-927A-52

Alignment of: us-10-726-967a-1 x US-09-794-927A-52 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.2
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	

Alignment:

```
22 ThrglnhsglylleargleuproleuargserglyleuglyalaPr 38
|||||
64 ACCGACGCGGATCCGCTGCCCTGCGCAGCGGCGGCGGCCCC 113
|||||
38 oLeuGlyLeu 41
|||||
114 CTTGGGGGCTG 123
```

Sequence name: rnp2ndb:US-09-548-373D-52

Sequence documentation:

Sequence 52, Application US/09548373D  
Patent No. 6737510  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
TITLE OF INVENTION: THEREOF

FILE REFERENCE: 29915/6280B  
CURRENT APPLICATION NUMBER: US/09/548,373D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 52  
LENGTH: 1305  
TYPE: DNA  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Aep2(b) delta TM  
US-09-548-373D-52

Alignment of: us-10-726-967a-1 x US-09-548-373D-52 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Escore:	32.2
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 Thrglnh1sgly1leargleuproleuargserglyleugly1a1apr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113
|||||
38 oleugly1eu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rntp2ndb:US-09-795-847B-52

Sequence documentation:

Sequence 52, Application US/09795847B  
Patent No. 6753163  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heintzke, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/6280B  
CURRENT APPLICATION NUMBER: US/09/795,847B  
CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 52  
LENGTH: 1305  
TYPE: DNA  
ORGANISM: Artificial sequence

FEATURE:  
OTHER INFORMATION: Hu-Aep2(b) delta TM  
US-09-795-847B-52

Alignment of: us-10-726-967a-1 x US-09-795-847B-52 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Escore:	32.2
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 Thrglnh1sgly1leargleuproleuargserglyleugly1a1apr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113
|||||
38 oleugly1eu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rntp2ndb:US-09-869-414-52

Sequence documentation:

Sequence 52, Application US/09869414  
Patent No. 6790610  
GENERAL INFORMATION:  
APPLICANT: Bienkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/6280B  
CURRENT APPLICATION NUMBER: US/09/869,414  
CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 52  
LENGTH: 1305  
TYPE: DNA  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Hu-Aep2(b)  
OTHER INFORMATION: delta TM  
US-09-869-414-52

Alignment of: us-10-726-967a-1 x US-09-869-414-52 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Escore:	32.2
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 Thrglnh1sgly1leargleuproleuargserglyleugly1a1apr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113
```



38 0LeuGlyLeu  
|||||  
114 CCGGGGCGCTG

41  
123

Sequence name: rnp2ndb:US-09-548-366F-52

Sequence documentation:  
; Sequence 52, Application US/09548366F  
; Patent No. 6797487  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280J  
; CURRENT APPLICATION NUMBER: US/09/548,366F  
; PRIOR FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ. ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 52  
; LENGTH: 1305  
; TYPE: DNA  
; ORGANISM: Artificial sequence  
; FEATURE:  
; OTHER INFORMATION: Hu-Ap2(b) delta TM  
US-09-548-366F-52

Alignment of: us-10-726-967a-1 x US-09-548-366F-52

Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	32.2
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCGAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGGCCCC 113  
|||||  
38 0LeuGlyLeu 41  
|||||  
114 CCGGGGCGCTG 123

Sequence name: rnp2ndb:US-09-548-368D-52

Sequence documentation:  
; Sequence 52, Application US/09548368D  
; Patent No. 6825023  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280C  
; CURRENT APPLICATION NUMBER: US/09/548,368D  
; PRIOR FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594

; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ. ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 52  
; LENGTH: 1305  
; TYPE: DNA  
; ORGANISM: Artificial sequence  
; FEATURE:  
; OTHER INFORMATION: Hu-Ap2(b) delta TM  
US-09-548-368D-52

Alignment of: us-10-726-967a-1 x US-09-548-368D-52

Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	32.2
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCGAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGGCCCC 113  
|||||  
38 0LeuGlyLeu 41  
|||||  
114 CCGGGGCGCTG 123

Sequence name: rnp2ndb:US-09-794-925A-52

Sequence documentation:  
; Sequence 52, Application US/09794925A  
; Patent No. 6828117  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280H1  
; CURRENT APPLICATION NUMBER: US/09/794,925A  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ. ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 52  
; LENGTH: 1305  
; TYPE: DNA  
; ORGANISM: Artificial sequence  
; FEATURE:  
; OTHER INFORMATION: Hu-Ap2(b) delta TM  
US-09-794-925A-52

Alignment of: us-10-726-967a-1 x US-09-794-925A-52

Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	32.2
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

## Alignment:

```
22 ThrglnhiegilyleargleuProleuAArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGAGCGGCTGGGGGCGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-548-372D-21

## Sequence documentation:

```
; Sequence 21, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-372D-21
```

Alignment of: us-10-726-967a-1 x US-09-548-372D-21 ..

## Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	

## Alignment:

```
22 ThrglnhiegilyleargleuProleuAArgSerGlyLeuGlyAlaPr 38
|||||
43 ACCGAGCAGCGCATCCGGCTGCCCTGCGAGCGGCTGGGGGCGCCCC 92
|||||
38 oleuGlyLeu 41
|||||
93 CCTGGGGGCTG 102
```

Sequence name: rni2ndb:US-09-548-367D-21

## Sequence documentation:

```
; Sequence 21, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,367D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
```

```
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-367D-21
```

Sequence name: rni2ndb:US-09-548-367D-21

Alignment of: us-10-726-967a-1 x US-09-548-367D-21 ..

## Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	

## Alignment:

```
22 ThrglnhiegilyleargleuProleuAArgSerGlyLeuGlyAlaPr 38
|||||
43 ACCGAGCAGCGCATCCGGCTGCCCTGCGAGCGGCTGGGGGCGCCCC 92
|||||
38 oleuGlyLeu 41
|||||
93 CCTGGGGGCTG 102
```

Sequence name: rni2ndb:US-09-551-853D-21

## Sequence documentation:

```
; Sequence 21, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/551,853D
; PRIOR FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 21
; LENGTH: 1341
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-551-853D-21
```

Alignment of: us-10-726-967a-1 x US-09-551-853D-21 ..

## Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38  
43 ACCGAGCAGCGCATCCGGCTGCCCCCTGCGCAGCGGCGCTGCGGCGCCCC 92  
38 OleuGlyLeu 41  
93 CCTGGGGGCTG 102

Sequence name: rmp2ndb:US-09-416-901B-21

Sequence documentation:

; Sequence 21, Application US/09416901B  
; Patent No. 669671  
; GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280A  
; CURRENT APPLICATION NUMBER: US/09/416,901B  
; CURRENT FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 72  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 21  
; LENGTH: 1341  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
; US-09-416-901B-21

Alignment of: us-10-726-967a-1 x US-09-416-901B-21 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38  
43 ACCGAGCAGCGCATCCGGCTGCCCCCTGCGCAGCGGCGCTGCGGCGCCCC 92  
38 OleuGlyLeu 41  
93 CCTGGGGGCTG 102

Sequence name: rmp2ndb:US-09-548-376D-21

Sequence documentation:

; Sequence 21, Application US/09548376D  
; Patent No. 6706485  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
; FILE REFERENCE: 29915/6280A  
; CURRENT APPLICATION NUMBER: US/09/548,376D  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 21  
; LENGTH: 1341  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
; US-09-548-376D-21

Alignment of: us-10-726-967a-1 x US-09-548-376D-21 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38  
43 ACCGAGCAGCGCATCCGGCTGCCCCCTGCGCAGCGGCGCTGCGGCGCCCC 92  
38 OleuGlyLeu 41  
93 CCTGGGGGCTG 102

Sequence name: rmp2ndb:US-09-794-927A-21

Sequence documentation:

; Sequence 21, Application US/09794927A  
; Patent No. 6727074  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280FG  
; CURRENT APPLICATION NUMBER: US/09/794,927A  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 21  
; LENGTH: 1341  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
; US-09-794-927A-21

Alignment of: us-10-726-967a-1 x US-09-794-927A-21 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||  
43 ACCGAGCAGCGCATCCGCTGCCCCCTGCGCAGCGGCTGCGGCGCGCCCC 92  
|||  
38 OleuGlyLeu 41  
|||  
93 CCTGGGGGCTG 102

Sequence name: rnp2ndb:US-09-548-373D-21

Sequence documentation:

/ Sequence 21, Application US/09548373D

/ Patent No. 6737510

/ GENERAL INFORMATION:

/ APPLICANT: GURNEY ET AL.

/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

/ FILE REFERENCE: 29915/6280B

/ CURRENT FILING DATE: 2000-04-12

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: US 60/155,493

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: US 09/404,133

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: PCT/US99/20881

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: US 60/101,594

/ PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 73

/ SOFTWARE: Patentin version 3.1

/ SEQ ID NO 21

/ LENGTH: 1341

/ TYPE: DNA

/ ORGANISM: Homo sapiens

/ US-09-548-373D-21

Alignment of: us-10-726-967a-1 x US-09-548-373D-21 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||  
43 ACCGAGCAGCGCATCCGCTGCCCCCTGCGCAGCGGCTGCGGCGCGCCCC 92  
|||  
38 OleuGlyLeu 41  
|||  
93 CCTGGGGGCTG 102

Sequence name: rnp2ndb:US-09-795-847B-21

Sequence documentation:

/ Sequence 21, Application US/09795847B

/ Patent No. 6753163

/ GENERAL INFORMATION:

/ APPLICANT: GURNEY, Mark E.

/ APPLICANT: Bienkowski, Michael J.

/ APPLICANT: Heinriksen, Robert L.

/ APPLICANT: Parodi, Luis A.

/ APPLICANT: Van, Ridsang

/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

/ FILE REFERENCE: 28341/6280B

/ CURRENT APPLICATION NUMBER: US/09/795,847B

/ CURRENT FILING DATE: 2001-02-28

/ PRIOR APPLICATION NUMBER: 09/416,901  
/ PRIOR FILING DATE: 1999-10-13  
/ PRIOR APPLICATION NUMBER: 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 09/404,133  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: PCT/US99/20881  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 60/101,594  
/ PRIOR FILING DATE: 1998-09-24  
/ NUMBER OF SEQ ID NOS: 74  
/ SOFTWARE: Patentin Ver. 2.0  
/ SEQ ID NO 21  
/ LENGTH: 1341  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens  
/ US-09-795-847B-21

Alignment of: us-10-726-967a-1 x US-09-795-847B-21 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||  
43 ACCGAGCAGCGCATCCGCTGCCCCCTGCGCAGCGGCTGCGGCGCGCCCC 92  
|||  
38 OleuGlyLeu 41  
|||  
93 CCTGGGGGCTG 102

Sequence name: rnp2ndb:US-09-869-414-21

Sequence documentation:

/ Sequence 21, Application US/09869414

/ Patent No. 6790610

/ GENERAL INFORMATION:

/ APPLICANT: Bienkowski et al.

/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

/ FILE REFERENCE: 28341/6280B

/ CURRENT APPLICATION NUMBER: US/09/869,414

/ CURRENT FILING DATE: 2001-06-27

/ PRIOR APPLICATION NUMBER: 09/416,901

/ PRIOR FILING DATE: 1999-10-13

/ PRIOR APPLICATION NUMBER: 60/155,493

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: 09/404,133

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: PCT/US99/20881

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: 60/101,594

/ PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 73

/ SOFTWARE: Patentin Ver. 2.0

/ SEQ ID NO 21

/ LENGTH: 1341

/ TYPE: DNA

/ ORGANISM: Homo sapiens

/ US-09-869-414-21

Alignment of: us-10-726-967a-1 x US-09-869-414-21 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.3
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
43 ACCGACGCGGATCGGCTGCCCTGGCGACGCGGCTGGGGGGGCCCC 92  
38 OLeuGlyLeu 41  
93 CTTGGGGCTG 102

Sequence name: rnp2ndb:US-09-548-366F-21

Sequence documentation:

; Sequence 21, Application US/09548366F

; Patent No. 6797487

; GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

; FILE REFERENCE: 29915/6280J

; CURRENT APPLICATION NUMBER: US/09/548,366F

; PRIOR FILING DATE: 2000-04-12

; PRIOR APPLICATION NUMBER: US 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 21

; LENGTH: 1341

; TYPE: DNA

; ORGANISM: Homo sapiens

; US-09-548-366F-21

Alignment of: us-10-726-967a-1 x US-09-548-366F-21 ..

Alignment segment 1/1: (+)

Quality: 104.00 Bscore: 32.3  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
43 ACCGACGCGGATCGGCTGCCCTGGCGACGCGGCTGGGGGGGCCCC 92  
38 OLeuGlyLeu 41  
93 CTTGGGGCTG 102

Sequence name: rnp2ndb:US-09-548-366D-21

Sequence documentation:

; Sequence 21, Application US/09548366D

; Patent No. 6825023

; GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

; FILE REFERENCE: 29915/6280C

; CURRENT APPLICATION NUMBER: US/09/548,366D

; CURRENT FILING DATE: 2000-04-12

; PRIOR APPLICATION NUMBER: US 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 21

; LENGTH: 1341

; TYPE: DNA

; ORGANISM: Homo sapiens

; US-09-548-366D-21

Alignment of: us-10-726-967a-1 x US-09-548-366D-21 ..

Alignment segment 1/1: (+)

Quality: 104.00 Bscore: 32.3  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
43 ACCGACGCGGATCGGCTGCCCTGGCGACGCGGCTGGGGGGGCCCC 92  
38 OLeuGlyLeu 41  
93 CTTGGGGCTG 102

Sequence name: rnp2ndb:US-09-794-925A-21

Sequence documentation:

; Sequence 21, Application US/09794925A

; Patent No. 6828117

; GENERAL INFORMATION:

; APPLICANT: Gurney et al.

; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

; FILE REFERENCE: 29915/6280H1

; CURRENT APPLICATION NUMBER: US/09/794,925A

; CURRENT FILING DATE: 2001-02-27

; PRIOR APPLICATION NUMBER: 09/416,901

; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 74

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 21

; LENGTH: 1341

; TYPE: DNA

; ORGANISM: Homo sapiens

; US-09-794-925A-21

Alignment of: us-10-726-967a-1 x US-09-794-925A-21 ..

Alignment segment 1/1: (+)

Quality: 104.00 Bscore: 32.3

Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
43 ACCCAGACGGCATCCGGCTGCCCTCGCAGCGGCTGGGGGGCGCCCC 92  
|||||  
38 OLeuGlyLeu 41  
|||||  
93 CCTGGGGGCTG 102

Sequence name: rnp2ndb:US-09-806-194A-21

## Sequence documentation:

Sequence 21, Application US/09806194A  
Patent No. 6835565  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
APPLICANT: Pharmacia & Upjohn Company  
FILE REFERENCE: 6177, P CP  
CURRENT APPLICATION NUMBER: US/09/806,194A  
PRIOR FILING DATE: 2001-09-17  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 49  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 21  
LENGTH: 1341  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-806-194A-21

Alignment of: us-10-726-967a-1 x US-09-806-194A-21 ..

## Alignment segment 1/1: (+)

Quality: 104.00 Score: 32.3  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
43 ACCCAGACGGCATCCGGCTGCCCTCGCAGCGGCTGGGGGGCGCCCC 92  
|||||  
38 OLeuGlyLeu 41  
|||||  
93 CCTGGGGGCTG 102

Sequence name: rnp2ndb:US-09-548-372D-29

## Sequence documentation:

Sequence 29, Application US/09548372D  
Patent No. 6420534  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/548,372D  
PRIOR FILING DATE: 2000-04-12

PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 29  
LENGTH: 1362  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-372D-29

Alignment of: us-10-726-967a-1 x US-09-548-372D-29 ..

## Alignment segment 1/1: (+)

Quality: 104.00 Score: 32.4  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCCAGACGGCATCCGGCTGCCCTCGCAGCGGCTGGGGGGCGCCCC 113  
|||||  
38 OLeuGlyLeu 41  
|||||  
114 CCTGGGGGCTG 123

Sequence name: rnp2ndb:US-09-548-367D-29

## Sequence documentation:

Sequence 29, Application US/09548367D  
Patent No. 6440698  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280H  
CURRENT APPLICATION NUMBER: US/09/548,367D  
PRIOR FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 29  
LENGTH: 1362  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-367D-29

Alignment of: us-10-726-967a-1 x US-09-548-367D-29 ..

## Alignment segment 1/1: (+)

Quality: 104.00 Score: 32.4  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeuPr 38  
64 ACCGACGACGGCATCCGGCTGCCCTGCCGACGCGGCTCGGGGGGCGCCCC 113  
38 OleuGlyLeu 41  
114 CCTGGGGGCTG 123

Sequence name: rmp2ndb:US-09-551-853D-29

## Sequence documentation:

Sequence 29, Application US/09551853D  
Patent No. 6500667  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280L  
CURRENT APPLICATION NUMBER: US/09/551,853D  
CURRENT FILING DATE: 2000-04-18  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 29  
LENGTH: 1362  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-551-853D-29

Alignment of: us-10-726-967a-1 x US-09-551-853D-29 ..

## Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeuPr 38  
64 ACCGACGACGGCATCCGGCTGCCCTGCCGACGCGGCTCGGGGGGCGCCCC 113  
38 OleuGlyLeu 41  
114 CCTGGGGGCTG 123

Sequence name: rmp2ndb:US-09-416-901B-29

## Sequence documentation:

Sequence 29, Application US/09416901B  
Patent No. 6693671  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280A  
CURRENT APPLICATION NUMBER: US/09/416,901B  
CURRENT FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 29  
LENGTH: 1362  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-416-901B-29

Alignment of: us-10-726-967a-1 x US-09-416-901B-29 ..

## Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeuPr 38  
64 ACCGACGACGGCATCCGGCTGCCCTGCCGACGCGGCTCGGGGGGCGCCCC 113  
38 OleuGlyLeu 41  
114 CCTGGGGGCTG 123

Sequence name: rmp2ndb:US-09-548-376D-29

## Sequence documentation:

Sequence 29, Application US/09548376D  
Patent No. 6706485  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280F  
CURRENT APPLICATION NUMBER: US/09/548,376D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 29  
LENGTH: 1362  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-376D-29

Alignment of: us-10-726-967a-1 x US-09-548-376D-29 ..

## Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

## Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACACGGCATCCGGCTGCCCTGGCGACGGCGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-794-927A-29

## Sequence documentation:

```
; Sequence 29, Application US/09794927A
; Patent No. 6727074
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-794-927A-29
```

Sequence of: us-10-726-967a-1 x US-09-794-927A-29 ..

## Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	

## Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACACGGCATCCGGCTGCCCTGGCGACGGCGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-548-373D-29

## Sequence documentation:

```
; Sequence 29, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280B
; CURRENT APPLICATION NUMBER: US/09/548,373D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
```

```
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-548-373D-29
```

Alignment of: us-10-726-967a-1 x US-09-548-373D-29 ..

## Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.4
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	

## Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACACGGCATCCGGCTGCCCTGGCGACGGCGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCGGGGGCTG 123
```

Sequence name: rni2ndb:US-09-795-847B-29

## Sequence documentation:

```
; Sequence 29, Application US/09795847B
; Patent No. 6753153
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Van Rigan
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847B
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
; LENGTH: 1362
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-795-847B-29
```

Alignment of: us-10-726-967a-1 x US-09-795-847B-29 ..

## Alignment segment 1/1: (+)



Quality: 104.00      Bscore: 32.4  
Matching length: 20      Total length: 20  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00

## Alignment:

22 ThrGlnH1gLy1IeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
64 ACCCGACGCGCATCCGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113  
38 OleuGlyLeu 41  
114 CCGGGGGCTG 123

Sequence name: rnp2ndb:US-09-869-414-29

## Sequence documentation:

Sequence 29, Application US/09869414  
Patent No. 6790610  
GENERAL INFORMATION:  
APPLICANT: Benikowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M  
CURRENT FILING DATE: US/09/869,414  
PRIOR FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 29  
LENGTH: 1362  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-869-414-29

Alignment of: us-10-726-967a-1 x US-09-869-414-29

## Alignment segment 1/1: (+)

Quality: 104.00      Bscore: 32.4  
Matching length: 20      Total length: 20  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00

## Alignment:

22 ThrGlnH1gLy1IeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
64 ACCCGACGCGCATCCGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113  
38 OleuGlyLeu 41  
114 CCGGGGGCTG 123

Sequence name: rnp2ndb:US-09-548-366F-29

## Sequence documentation:

Sequence 29, Application US/09548366F  
Patent No. 6797487  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280J  
CURRENT FILING DATE: US/09/548,366F  
CURRENT APPLICATION NUMBER: US/09/548,366F  
CURRENT FILING DATE: 2000-04-12  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin version 3.1  
SEQ ID NO 29  
LENGTH: 1362  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-366F-29

Alignment of: us-10-726-967a-1 x US-09-548-366F-29

## Alignment segment 1/1: (+)

Quality: 104.00      Bscore: 32.4  
Matching length: 20      Total length: 20  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00

## Alignment:

22 ThrGlnH1gLy1IeArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
64 ACCCGACGCGCATCCGCTGCCCTGCGCAGCGGCTGGGGGGCCCC 113  
38 OleuGlyLeu 41  
114 CCGGGGGCTG 123

Sequence name: rnp2ndb:US-09-548-368D-29

## Sequence documentation:

Sequence 29, Application US/09548368D  
Patent No. 6825023  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280C  
CURRENT FILING DATE: US/09/548,368D  
CURRENT FILING DATE: 2000-04-12  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin version 3.1  
SEQ ID NO 29  
LENGTH: 1362  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-368D-29

Alignment of: us-10-726-967a-1 x US-09-548-368D-29

## Alignment segment 1/1: (+)

Quality: 104.00      Bscore: 32.4  
Matching length: 20      Total length: 20  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00

Alignment of: us-10-726-967a-1 x US-09-548-368D-29

## Alignment segment 1/1: (+)

Quality: 104.00      EScore: 32.4  
Matching length: 20      Total length: 20  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHISGlyTLeaArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGACGACGGCATCCGGCTGCCCCCGACGCGGCTGAGGGGCGCCCC 113  
|||  
38 oLeuGlyLeu 41  
|||||  
114 CCTGGGGGCTG 123

Sequence name: rmlp2ndb:US-09-794-925A-29

## Sequence documentation:

/ Sequence 29, Application US/09794925A  
/ Patent No. 6828117  
/ GENERAL INFORMATION:  
/ APPLICANT: Gurney et al.  
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
/ FILE REFERENCE: 29915/6280H1  
/ CURRENT APPLICATION NUMBER: US/09/794,925A  
/ CURRENT FILING DATE: 2001-02-27  
/ PRIOR APPLICATION NUMBER: 09/416,901  
/ PRIOR FILING DATE: 1999-10-13  
/ PRIOR APPLICATION NUMBER: 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 09/404,133  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: PCT/US99/20881  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 60/101,594  
/ NUMBER OF SEQ ID NOS: 74  
/ SOFTWARE: PatentIn Ver. 2.0  
/ SEQ ID NO 29  
/ LENGTH: 1362  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens  
/ US-09-794-925A-29

Alignment of: us-10-726-967a-1 x US-09-794-925A-29 ..

## Alignment segment 1/1: (+)

Quality: 104.00      EScore: 32.4  
Matching length: 20      Total length: 20  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHISGlyTLeaArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGACGACGGCATCCGGCTGCCCCCGACGCGGCTGAGGGGCGCCCC 113  
|||  
38 oLeuGlyLeu 41  
|||||  
114 CCTGGGGGCTG 123

Sequence name: rmlp2ndb:US-09-806-194A-29

## Sequence documentation:

/ Sequence 29, Application US/09806194A  
/ Patent No. 6835565  
/ GENERAL INFORMATION:  
/ APPLICANT: Gurney, Mark E.

/ APPLICANT: Bienkowski, Michael J.

/ APPLICANT: Heinrikson, Robert L.

/ APPLICANT: Parodi, Luis A.

/ APPLICANT: Yan, Riqiang

/ APPLICANT: Pharmacia &amp; Upjohn Company

/ TITLE OF INVENTION: Alzheimer's Disease Secretase

/ FILE REFERENCE: 6177.P CP

/ CURRENT APPLICATION NUMBER: US/09/806,194A

/ CURRENT FILING DATE: 2001-09-17

/ PRIOR APPLICATION NUMBER: 60/101,594

/ PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 49

/ SOFTWARE: PatentIn Ver. 2.0

/ SEQ ID NO 29

/ LENGTH: 1362

/ TYPE: DNA

/ ORGANISM: Homo sapiens

/ US-09-806-194A-29

## Alignment:

22 ThrGlnHISGlyTLeaArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
|||||  
64 ACCGACGACGGCATCCGGCTGCCCCCGACGCGGCTGAGGGGCGCCCC 113  
|||  
38 oLeuGlyLeu 41  
|||||  
114 CCTGGGGGCTG 123

Sequence name: rmlp2ndb:US-09-548-372D-23

## Sequence documentation:

/ Sequence 23, Application US/09548372D  
/ Patent No. 6420534  
/ GENERAL INFORMATION:  
/ APPLICANT: GURNEY ET AL.  
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
/ FILE REFERENCE: 29915/6280I  
/ CURRENT APPLICATION NUMBER: US/09/548,372D  
/ CURRENT FILING DATE: 2000-04-12  
/ PRIOR APPLICATION NUMBER: US 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: US 09/404,133  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: PCT/US99/20881  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: US 60/101,594  
/ NUMBER OF SEQ ID NOS: 73  
/ SOFTWARE: PatentIn version 3.1  
/ SEQ ID NO 23  
/ LENGTH: 1380  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens  
/ US-09-548-372D-23

Alignment of: us-10-726-967a-1 x US-09-548-372D-23 ..

## Alignment segment 1/1: (+)

Quality: 104.00      EScore: 32.5  
Matching length: 20      Total length: 20

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
82 ACCGACGACGGCATCCGGCTGCTCCCTGCGCAGCGGCTGGGGGGGCCCC 131
|||||
38 OleuGlyLeu 41
|||||
132 CCTGGGGGCTG 141
```

Sequence name: rnp2ndb:US-09-548-372D-31

Sequence documentation:

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; Sequence 31, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-372D-31
```

Alignment of: us-10-726-967a-1 x US-09-548-372D-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	32.5
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	
Gaps:	0			

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
64 ACCGACGACGGCATCCGGCTGCTCCCTGCGCAGCGGCTGGGGGGGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnp2ndb:US-09-548-367D-23

Sequence documentation:

```
; Sequence 23, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
```

```
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-367D-23
```

Alignment of: us-10-726-967a-1 x US-09-548-367D-23 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	32.5
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	
Gaps:	0			

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
|||||
82 ACCGACGACGGCATCCGGCTGCTCCCTGCGCAGCGGCTGGGGGGGCCCC 131
|||||
38 OleuGlyLeu 41
|||||
132 CCTGGGGGCTG 141
```

Sequence name: rnp2ndb:US-09-548-367D-31

Sequence documentation:

```
; Sequence 31, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-367D-31
```

Alignment of: us-10-726-967a-1 x US-09-548-367D-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	32.5
Matching length:	20		20	
Matching Percent Similarity:	100.00		100.00	
Total Percent Similarity:	100.00		100.00	

Gaps: 0

Alignment:

```
22 ThrGlnHISGlyTLeaArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
38 OleuGlyLeu 41
114 CCTGGGGCTG 123
```

Sequence name: rni2ndb:US-09-551-853D-23

Sequence documentation:

```
; Sequence 23, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT APPLICATION NUMBER: US/09/551,853D
; PRIOR FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-551-853D-23
```

Alignment of: us-10-726-967a-1 x US-09-551-853D-23 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	

Alignment:

```
22 ThrGlnHISGlyTLeaArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
82 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 131
38 OleuGlyLeu 41
132 CCTGGGGCTG 141
```

Sequence name: rni2ndb:US-09-551-853D-31

Sequence documentation:

```
; Sequence 31, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT APPLICATION NUMBER: US/09/551,853D
; CURRENT FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
```

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn version 3.1

SEQ ID NO 31

LENGTH: 1380

TYPE: DNA

ORGANISM: Homo sapiens

US-09-551-853D-31

Alignment of: us-10-726-967a-1 x US-09-551-853D-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	

Alignment:

```
22 ThrGlnHISGlyTLeaArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113
38 OleuGlyLeu 41
114 CCTGGGGCTG 123
```

Sequence name: rni2ndb:US-09-416-901B-23

Sequence documentation:

```
; Sequence 23, Application US/09416901B
; Patent No. 669671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/416,901B
; CURRENT FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-416-901B-23
```

Alignment of: us-10-726-967a-1 x US-09-416-901B-23 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	

## Alignment:

22 ThrGlnHsGlyIleArgLeuProLeuAArgSerGlyLeuGlyAlaAPr 38  
|||  
82 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 131  
|||  
38 OleuGlyLeu 41  
|||  
132 CTTGGGGGCTG 141

Sequence name: rnp2ndb:US-09-416-901B-31

## Sequence documentation:

Sequence 31. Application US/09416901B  
Patent No. 669671  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280A  
CURRENT APPLICATION NUMBER: US/09/416,901B  
CURRENT FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 31  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-416-901B-31

Alignment of: us-10-726-967a-1 x US-09-416-901B-31 ..

## Alignment segment 1/1: (+)

Quality: 104.00 Basecore: 32.5  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHsGlyIleArgLeuProLeuAArgSerGlyLeuGlyAlaAPr 38  
|||  
64 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 113  
|||  
38 OleuGlyLeu 41  
|||  
114 CTTGGGGGCTG 123

Sequence name: rnp2ndb:US-09-548-376D-23

## Sequence documentation:

Sequence 23. Application US/09548376D  
Patent No. 6706485  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
FILE REFERENCE: 29915/6280P  
CURRENT APPLICATION NUMBER: US/09/548,376D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PatentIn version 3.1

SEQ ID NO 23

LENGTH: 1380

TYPE: DNA

ORGANISM: Homo sapiens

US-09-548-376D-23

Alignment of: us-10-726-967a-1 x US-09-548-376D-23 ..

## Alignment segment 1/1: (+)

Quality: 104.00 Basecore: 32.5  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThrGlnHsGlyIleArgLeuProLeuAArgSerGlyLeuGlyAlaAPr 38  
|||  
82 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGGCTGGGGGCGCCCC 131  
|||  
38 OleuGlyLeu 41  
|||  
132 CTTGGGGGCTG 141

Sequence name: rnp2ndb:US-09-548-376D-31

## Sequence documentation:

Sequence 31. Application US/09548376D  
Patent No. 6706485  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
FILE REFERENCE: 29915/6280P  
CURRENT APPLICATION NUMBER: US/09/548,376D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 31  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-376D-31

Alignment of: us-10-726-967a-1 x US-09-548-376D-31 ..

## Alignment segment 1/1: (+)

Quality: 104.00 Basecore: 32.5  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

22 ThGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38  
|||  
64 ACCGAGACGGCATCCGGCTGCCCTGGCAGCGGGCTGGGGGGCCCC 113  
38 oLeuGlyLeu 41  
|||  
114 CCTGGGGCTG 123

Sequence name: rnp2ndb:US-09-794-927A-23

## Sequence documentation:

Sequence 23, Application US/09794927A  
Patent No. 6727074  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280FG  
CURRENT APPLICATION NUMBER: US/09/794,927A  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 23  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-927A-23

Alignment of: us-10-726-967A-1 x US-09-794-927A-23 ..

## Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

## Alignment:

22 ThGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38  
|||  
82 ACCGAGACGGCATCCGGCTGCCCTGGCAGCGGGCTGGGGGGCCCC 131  
38 oLeuGlyLeu 41  
|||  
132 CCTGGGGCTG 141

Sequence name: rnp2ndb:US-09-794-927A-31

## Sequence documentation:

Sequence 31, Application US/09794927A  
Patent No. 6727074  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280FG  
CURRENT APPLICATION NUMBER: US/09/794,927A  
PRIOR FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 31  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-927A-31

Alignment of: us-10-726-967A-1 x US-09-794-927A-31 ..

## Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

## Alignment:

22 ThGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38  
|||  
64 ACCGAGACGGCATCCGGCTGCCCTGGCAGCGGGCTGGGGGGCCCC 113  
38 oLeuGlyLeu 41  
|||  
114 CCTGGGGCTG 123

Sequence name: rnp2ndb:US-09-548-373D-23

## Sequence documentation:

Sequence 23, Application US/09548373D  
Patent No. 6737510  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280B  
CURRENT APPLICATION NUMBER: US/09/548,373D  
PRIOR FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 23  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-373D-23

Alignment of: us-10-726-967A-1 x US-09-548-373D-23 ..

## Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	

Gaps: 0

## Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
82 ACCGACGACGGCATCCGGCTGCCCTCGGCACGCGGCTCGGGGGGGCCCC 131
|||
38 OleuGlyLeu 41
|||
132 CCGGGGGGCTG 141
```

Sequence name: rnp2ndb:US-09-548-373D-31

## Sequence documentation:

```
; Sequence 31, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280B
; CURRENT APPLICATION NUMBER: US/09/548, 373D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-373D-31
```

Alignment of: us-10-726-967a-1 x US-09-548-373D-31 ..

## Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

## Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
64 ACCGACGACGGCATCCGGCTGCCCTCGGCACGCGGCTCGGGGGGGCCCC 113
|||
38 OleuGlyLeu 41
|||
114 CCGGGGGGCTG 123
```

Sequence name: rnp2ndb:US-09-795-847B-23

## Sequence documentation:

```
; Sequence 23, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Blenkowski, Michael J.
; APPLICANT: Heintzson, Robert L.
; APPLICANT: Yan, Riqiang
; APPLICANT: Parodi, Luis A.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; THEREFOR
```

FILE REFERENCE: 28341/6280DE

```
; CURRENT APPLICATION NUMBER: US/09/795,847B
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-795-847B-23
```

Alignment of: us-10-726-967a-1 x US-09-795-847B-23 ..

## Alignment segment 1/1: (+)

	Quality:	104.00		Score:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

## Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||
82 ACCGACGACGGCATCCGGCTGCCCTCGGCACGCGGCTCGGGGGGGCCCC 131
|||
38 OleuGlyLeu 41
|||
132 CCGGGGGGCTG 141
```

Sequence name: rnp2ndb:US-09-795-847B-31

## Sequence documentation:

```
; Sequence 31, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Blenkowski, Michael J.
; APPLICANT: Heintzson, Robert L.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847B
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
```

US-09-795-847B-31

Alignment of: us-10-726-967a-1 x US-09-795-847B-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Base:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CTTGGGGCTG 123
```

Sequence name: rn1p2ndb:US-09-869-414-23

Sequence documentation:

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/ Sequence 23, Application US/09869414
/ Patent No. 6790610
/ GENERAL INFORMATION:
/ APPLICANT: Beinkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M
/ CURRENT APPLICATION NUMBER: US/09/869,414
/ PRIOR FILING DATE: 2001-06-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 23
/ LENGTH: 1380
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-869-414-23
```

Alignment of: us-10-726-967a-1 x US-09-869-414-23 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Base:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
82 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 131
|||||
38 oleuGlyLeu 41
|||||
132 CTTGGGGCTG 141
```

Sequence name: rn1p2ndb:US-09-869-414-31

Sequence documentation:

```
/ Sequence 31, Application US/09869414
/ Patent No. 6790610
/ GENERAL INFORMATION:
/ APPLICANT: Beinkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M
/ CURRENT APPLICATION NUMBER: US/09/869,414
/ PRIOR FILING DATE: 2001-06-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 31
/ LENGTH: 1380
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-869-414-31
```

Alignment of: us-10-726-967a-1 x US-09-869-414-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Base:	32.5
Matching length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCTGGGGGGGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CTTGGGGCTG 123
```

Sequence name: rn1p2ndb:US-09-548-366F-23

Sequence documentation:

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/ Sequence 23, Application US/09548366F
/ Patent No. 6797467
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280J
/ CURRENT APPLICATION NUMBER: US/09/548,366F
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 23
/ LENGTH: 1380
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TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-366F-23

Alignment of: us-10-726-967a-1 x US-09-548-366F-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLys 38  
82 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGGGGGGGGCCCC 131  
38 olenuGlyLeu 41  
132 CCTGGGGGCTG 141

Sequence name: rmlp2ndb:US-09-548-366F-31

Sequence documentation:

Sequence 31, Application US/09548366F  
Patent No. 6797487  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280J  
CURRENT FILING DATE: 2000-04-12  
CURRENT APPLICATION NUMBER: US/09/548,366F  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 31  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-366F-31

Alignment of: us-10-726-967a-1 x US-09-548-366F-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLys 38  
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGGGGGGGGCCCC 113  
38 olenuGlyLeu 41  
114 CCTGGGGGCTG 123

Sequence name: rmlp2ndb:US-09-548-368D-23

Sequence documentation:  
Sequence 23, Application US/09548368D  
Patent No. 6825023  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280C  
CURRENT FILING DATE: 2000-04-12  
CURRENT APPLICATION NUMBER: US/09/548,368D  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 23  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-368D-23

Alignment of: us-10-726-967a-1 x US-09-548-368D-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	32.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLys 38  
82 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGGGGGGGGCCCC 131  
38 olenuGlyLeu 41  
132 CCTGGGGGCTG 141

Sequence name: rmlp2ndb:US-09-548-368D-31

Sequence documentation:

Sequence 31, Application US/09548368D  
Patent No. 6825023  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280C  
CURRENT FILING DATE: 2000-04-12  
CURRENT APPLICATION NUMBER: US/09/548,368D  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 31  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens

US-09-548-368D-31

Alignment of: us-10-726-967a-1 x US-09-548-368D-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00	EScore:	32.5
Matching length:	20		Total length:	20
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIAPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCTGCGACGCGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rn1p2ndb:US-09-794-925A-23

Sequence documentation:

```
/ Sequence 23, Application US/09794925A
/ Patent No. 6828117
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925A
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 23
/ LENGTH: 1380
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ US-09-794-925A-23
```

Alignment of: us-10-726-967a-1 x US-09-794-925A-23 ..

Alignment segment 1/1: (+)

	Quality:	104.00	EScore:	32.5
Matching length:	20		Total length:	20
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIAPr 38
|||||
82 ACCGACGACGGCATCCGGCTGCTGCGACGCGCTGGGGGGCGCCCC 131
|||||
38 OleuGlyLeu 41
|||||
132 CTGGGGGCTG 141
```

Sequence name: rn1p2ndb:US-09-794-925A-31

Sequence documentation:

```
/ Sequence 31, Application US/09794925A
/ Patent No. 6828117
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ FILE REFERENCE: 29915/6280H1
/ CURRENT APPLICATION NUMBER: US/09/794,925A
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 31
/ LENGTH: 1380
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ US-09-794-925A-31
```

Alignment of: us-10-726-967a-1 x US-09-794-925A-31 ..

Alignment segment 1/1: (+)

	Quality:	104.00	EScore:	32.5
Matching length:	20		Total length:	20
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00
Total Percent Similarity:	100.00		Total Percent Identity:	100.00
Gaps:	0			

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIAPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCTGCGACGCGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CTGGGGGCTG 123
```

Sequence name: rn1p2ndb:US-09-806-194A-23

Sequence documentation:

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/ Sequence 23, Application US/09806194A
/ Patent No. 683565
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ APPLICANT: Pharmacia & Upjohn Company
/ TITLE OF INVENTION: Alzheimer's Disease Secretase
/ FILE REFERENCE: 6177.P CP
/ CURRENT APPLICATION NUMBER: US/09/806,194A
/ PRIOR FILING DATE: 2001-09-17
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 49
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 23
/ LENGTH: 1380
/ TYPE: DNA
/ ORGANISM: Homo sapiens
```

US-09-806-194A-23

Alignment of: us-10-726-967a-1 x US-09-806-194A-23 ..

Alignment segment 1/1: (+)

Quality:	104.00	Base:	32.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHISGLYILEARGLEUPROLEUARGSERGLYLEUGLYALAPR 38
|||||
82 ACCGACGACGGCATCGGCTGCCCTGCCGACGGCGCTGGGGGGGCCCC 131
|||||
38 OLeuGLYLEU
|||||
132 CTGGGGGCTG
|||||
141
```

Sequence name: rnp2ndb:US-09-806-194A-31

Sequence documentation:

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; Sequence 31, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177, P. CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; PRIOR FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-806-194A-31
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Alignment of: us-10-726-967a-1 x US-09-806-194A-31 ..

Alignment segment 1/1: (+)

Quality:	104.00	Base:	32.5
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHISGLYILEARGLEUPROLEUARGSERGLYLEUGLYALAPR 38
|||||
64 ACCGACGACGGCATCGGCTGCCCTGCCGACGGCGCTGGGGGGGCCCC 113
|||||
38 OLeuGLYLEU
|||||
114 CTGGGGGCTG
|||||
123
```

Sequence name: rnp2ndb:US-09-724-566A-1

Sequence documentation:

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; Sequence 1, Application US/09724566A
; Patent No. 6627739
```

GENERAL INFORMATION:

```
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Guripal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; FILE REFERENCE: 228-US-NWC2
; CURRENT APPLICATION NUMBER: US/09/724,566A
; PRIOR FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 1503
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-724-566A-1
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Alignment of: us-10-726-967a-1 x US-09-724-566A-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Base:	32.8
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHISGLYILEARGLEUPROLEUARGSERGLYLEUGLYALAPR 38
|||||
64 ACCGACGACGGCATCGGCTGCCCTGCCGACGGCGCTGGGGGGGCCCC 113
|||||
38 OLeuGLYLEU
|||||
114 CTGGGGGCTG
|||||
123
```

Sequence name: rnp2ndb:US-09-471-669A-1

Sequence documentation:

```
; Sequence 1, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Guripal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Sinha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; APPLICANT: Rian Pharmaceuticals, Inc.
; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
; FILE REFERENCE: 015270-006430US
; CURRENT APPLICATION NUMBER: US/09/471,669A
; CURRENT FILING DATE: 1999-12-24
```

;; PRIOR APPLICATION NUMBER: US 60/114,408  
;; PRIOR FILING DATE: 1998-12-31  
;; PRIOR APPLICATION NUMBER: US 60/119,571  
;; PRIOR FILING DATE: 1999-02-10  
;; PRIOR APPLICATION NUMBER: US 60/139,172  
;; PRIOR FILING DATE: 1999-06-15  
;; NUMBER OF SEQ ID NOS: 108  
;; SOFTWARE: Patent In Ver. 2.1  
;; SEQ ID NO 1  
;; LENGTH: 1503  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-09-471-669A-1

Alignment of: us-10-726-967a-1 x US-09-471-669A-1 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	32.8
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGCGCTCGGGGGGCGCCCC 113
38 OleuGlyLeu
114 CCTGGGGGCTG 41
123
```

Sequence name: rn1p2ndb:US-09-548-372D-5

Sequence documentation:

;; Sequence 5, Application US/09548372D  
;; Patent No. 6420534  
;; GENERAL INFORMATION:  
;; APPLICANT: GURNEY ET AL.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
;; TITLE OF INVENTION: THEREOF  
;; FILE REFERENCE: 29915/62801  
;; CURRENT APPLICATION NUMBER: US/09/548,372D  
;; CURRENT FILING DATE: 2000-04-12  
;; PRIOR APPLICATION NUMBER: US 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: Patent In version 3.1  
;; SEQ ID NO 5  
;; LENGTH: 1977  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-09-548-372D-5

Alignment of: us-10-726-967a-1 x US-09-548-372D-5 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	34
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGCGCTCGGGGGGCGCCCC 113
38 OleuGlyLeu
114 CCTGGGGGCTG 41
123
```

Sequence name: rn1p2ndb:US-09-548-367D-5

Sequence documentation:

;; Sequence 5, Application US/09548367D  
;; Patent No. 6440698  
;; GENERAL INFORMATION:  
;; APPLICANT: GURNEY ET AL.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
;; TITLE OF INVENTION: THEREOF  
;; FILE REFERENCE: 29915/62801  
;; CURRENT APPLICATION NUMBER: US/09/548,367D  
;; CURRENT FILING DATE: 2000-04-12  
;; PRIOR APPLICATION NUMBER: US 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: Patent In version 3.1  
;; SEQ ID NO 5  
;; LENGTH: 1977  
;; TYPE: DNA  
;; ORGANISM: Homo sapiens  
US-09-548-367D-5

Alignment of: us-10-726-967a-1 x US-09-548-367D-5 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	34
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGCGCTCGGGGGGCGCCCC 113
38 OleuGlyLeu
114 CCTGGGGGCTG 41
123
```

Sequence name: rn1p2ndb:US-09-551-853D-5

Sequence documentation:

;; Sequence 5, Application US/09551853D  
;; Patent No. 6500667  
;; GENERAL INFORMATION:  
;; APPLICANT: GURNEY ET AL.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
;; TITLE OF INVENTION: THEREOF  
;; FILE REFERENCE: 29915/62801  
;; CURRENT APPLICATION NUMBER: US/09/551,853D  
;; CURRENT FILING DATE: 2000-04-18  
;; PRIOR APPLICATION NUMBER: US 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 09/404,133  
;; PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-551-853D-5

Alignment of: us-10-726-967a-1 x US-09-551-853D-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGGCTGCGCCCTGCGACGCGGCTGCGGCGCGCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rmp2ndb:US-09-416-901B-5

Sequence documentation:

Sequence 5, Application US/09416901B  
Patent No. 6699671  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280A  
CURRENT APPLICATION NUMBER: US/09/416,901B  
CURRENT FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-416-901B-5

Alignment of: us-10-726-967a-1 x US-09-416-901B-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
```

```
64 ACCGACGACGCGATCCGGCTGCGCCCTGCGACGCGGCTGCGGCGCGCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rmp2ndb:US-09-548-376D-5

Sequence documentation:

Sequence 5, Application US/09548376D  
Patent No. 6706485  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
FILE REFERENCE: 29915/6280F  
CURRENT APPLICATION NUMBER: US/09/548,376D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-376D-5

Alignment of: us-10-726-967a-1 x US-09-548-376D-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGGCTGCGCCCTGCGACGCGGCTGCGGCGCGCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rmp2ndb:US-09-794-927A-5

Sequence documentation:

Sequence 5, Application US/09794927A  
Patent No. 6727074  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280FG  
CURRENT APPLICATION NUMBER: US/09/794,927A  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133

```
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-927A-5
```

Alignment of: us-10-726-967a-1 x US-09-794-927A-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGCGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: mnp2ndb:US-09-548-373D-5

Sequence documentation:

```
; Sequence 5, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 28915/6280B
; CURRENT APPLICATION NUMBER: US/09/548,373D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patent In version 3.1
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-373D-5
```

Alignment of: us-10-726-967a-1 x US-09-548-373D-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGCGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: mnp2ndb:US-09-795-847B-5

Sequence documentation:

```
; Sequence 5, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Rigidang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847B
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-795-847B-5
```

Alignment of: us-10-726-967a-1 x US-09-795-847B-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCCAGCGCGCTGGGGGGCGCCCC 113
|||||
38 OleuGlyLeu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: mnp2ndb:US-09-869-414-5

Sequence documentation:

```
; Sequence 5, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Beinowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
```

CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-869-414-5

Alignment of: us-10-726-967a-1 x US-09-869-414-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGACGCGGCTGGGGGCGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rmlp2ndb:US-09-548-366F-5

Sequence documentation:

Sequence 5, Application US/09548366F  
Patent No. 6797467  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280J  
CURRENT APPLICATION NUMBER: US/09/548,366F  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-366F-5

Alignment of: us-10-726-967a-1 x US-09-548-366F-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34
Matching length:	20	Total length:	20

Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGACGCGGCTGGGGGCGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rmlp2ndb:US-09-548-368D-5

Sequence documentation:

Sequence 5, Application US/09548368D  
Patent No. 6825023  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280C  
CURRENT APPLICATION NUMBER: US/09/548,368D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-368D-5

Alignment of: us-10-726-967a-1 x US-09-548-368D-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTGCGACGCGGCTGGGGGCGCCCC 113
|||||
38 oleuGlyLeu 41
|||||
114 CCTGGGGCTG 123
```

Sequence name: rmlp2ndb:US-09-794-925A-5

Sequence documentation:

Sequence 5, Application US/09794925A  
Patent No. 6828117  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280H1  
CURRENT APPLICATION NUMBER: US/09/794,925A

CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-925A-5

Alignment of: us-10-726-967a-1 x US-09-794-925A-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34
Matching length:	20	Total length:	100.00
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```
22  ThGlnHnIsgLYlIeaRgLeuProLeuArgSerGlyLeuGlyGlyAlaPr 38
64  ACCGAGCAGCGGATCCGGCTGCGCCCTGCGCAGCGGCGCTGGGGGCGCCCC 113
38  oLeuGlyLeu
114  CCGGGGCGCTG 41
123
```

Sequence name: rn1p2ndb:US-09-806-194A-5

Sequence documentation:

Sequence 5, Application US/09806194A  
Patent No. 6835565  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
APPLICANT: Pharmacia & Upjohn Company  
TITLE OF INVENTION: Alzheimer's Disease Secretase  
FILE REFERENCE: 6177, P CP  
CURRENT APPLICATION NUMBER: US/09/806,194A  
PRIOR FILING DATE: 2001-09-17  
PRIOR APPLICATION NUMBER: 60/101,594  
NUMBER OF SEQ ID NOS: 49  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-806-194A-5

Alignment of: us-10-726-967a-1 x US-09-806-194A-5 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34
Matching length:	20	Total length:	100.00
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```
22  ThGlnHnIsgLYlIeaRgLeuProLeuArgSerGlyLeuGlyGlyAlaPr 38
64  ACCGAGCAGCGGATCCGGCTGCGCCCTGCGCAGCGGCGCTGGGGGCGCCCC 113
38  oLeuGlyLeu
114  CCGGGGCGCTG 41
123
```

Sequence name: rn1p2ndb:US-09-548-372D-3

Sequence documentation:

Sequence 3, Application US/09548372D  
Patent No. 6420534  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/548,372D  
PRIOR FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-372D-3

Alignment of: us-10-726-967a-1 x US-09-548-372D-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```
22  ThGlnHnIsgLYlIeaRgLeuProLeuArgSerGlyLeuGlyGlyAlaPr 38
64  ACCGAGCAGCGGATCCGGCTGCGCCCTGCGCAGCGGCGCTGGGGGCGCCCC 113
38  oLeuGlyLeu
114  CCGGGGCGCTG 41
123
```

Sequence name: rn1p2ndb:US-09-548-367D-3

Sequence documentation:

Sequence 3, Application US/09548367D  
Patent No. 6440698  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/548,367D  
PRIOR FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493



PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-367D-3

Alignment of: us-10-726-967a-1 x US-09-548-367D-3 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Bscore:	34.2
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps: 0			

Alignment:

```
22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGAGCAGCGCATCCGGCTGCCCTGGCGAGCGGCGGCGGCCCC 113
38 oLeuGlyLeu
114 CCTGGGGGCTG
41
123
```

Sequence name: rni2ndb:US-09-551-853D-3

Sequence documentation:

Sequence 3, Application US/09551853D  
Patent No. 6500667  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280L  
CURRENT APPLICATION NUMBER: US/09/551,853D  
PRIOR FILING DATE: 2000-04-18  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-551-853D-3

Alignment of: us-10-726-967a-1 x US-09-551-853D-3 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Bscore:	34.2
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps: 0			

Alignment:

```
22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGAGCAGCGCATCCGGCTGCCCTGGCGAGCGGCGGCGGCCCC 113
38 oLeuGlyLeu
114 CCTGGGGGCTG
41
123
```

Sequence name: rni2ndb:US-09-416-901B-3

Sequence documentation:

Sequence 3, Application US/09416901B  
Patent No. 6698671  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280A  
CURRENT APPLICATION NUMBER: US/09/416,901B  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-416-901B-3

Alignment of: us-10-726-967a-1 x US-09-416-901B-3 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Bscore:	34.2
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps: 0			

Alignment:

```
22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGAGCAGCGCATCCGGCTGCCCTGGCGAGCGGCGGCGGCCCC 113
38 oLeuGlyLeu
114 CCTGGGGGCTG
41
123
```

Sequence name: rni2ndb:US-09-548-376D-3

Sequence documentation:

Sequence 3, Application US/09548376D  
Patent No. 6706485  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280F  
CURRENT APPLICATION NUMBER: US/09/548,376D  
PRIOR FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23

```
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ US-09-548-376D-3
```

Alignment of: us-10-726-967a-1 x US-09-548-376D-3 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Escore:	34.2
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTCGCGACGCGGCTGGGGGGCGCCCC 113
38 oLeuGlyLeu
|||||
114 CCTGGGGGCTG
123
```

Sequence name: rni2ndb:US-09-794-927A-3

Sequence documentation:

```
/ Sequence 3, Application US/09794927A
/ Patent No. 6727074
/ GENERAL INFORMATION:
/ APPLICANT: Gurney et al.
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
/ TITLE OF INVENTION: Therefor
/ FILE REFERENCE: 29915/6280FG
/ CURRENT APPLICATION NUMBER: US/09/794,927A
/ PRIOR FILING DATE: 2001-02-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ US-09-794-927A-3
```

Alignment of: us-10-726-967a-1 x US-09-794-927A-3 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Escore:	34.2
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTCGCGACGCGGCTGGGGGGCGCCCC 113
38 oLeuGlyLeu
|||||
114 CCTGGGGGCTG
123
```

Sequence name: rni2ndb:US-09-548-373D-3

Sequence documentation:

```
/ Sequence 3, Application US/09548373D
/ Patent No. 6737510
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 29915/6280B
/ CURRENT APPLICATION NUMBER: US/09/548,373D
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 3
/ LENGTH: 2070
/ TYPE: DNA
/ ORGANISM: Homo sapiens
/ US-09-548-373D-3
```

Alignment of: us-10-726-967a-1 x US-09-548-373D-3 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Escore:	34.2
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||||
64 ACCGACGACGGCATCCGGCTGCCCTCGCGACGCGGCTGGGGGGCGCCCC 113
38 oLeuGlyLeu
|||||
114 CCTGGGGGCTG
123
```

Sequence name: rni2ndb:US-09-795-847B-3

Sequence documentation:

```
/ Sequence 3, Application US/09795847B
/ Patent No. 6753163
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ TITLE OF INVENTION: THEREFOR
/ FILE REFERENCE: 28341/6280DE
```

CURRENT APPLICATION NUMBER: US/09/795,847B  
CURRENT FILING DATE: 2001-02-28  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-795-847B-3

Alignment of: us-10-726-967a-1 x US-09-795-847B-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCGGCTGCCCTGGCGACGCGGCTGGGGGGCGCC 113
|||||
38 olenglyleu 41
|||||
114 CTTGGGGCTG 123
```

Sequence name: rnp2ndb:US-09-869-414-3

Sequence documentation:  
Sequence 3, Application US/09869414  
Patent No. 6790610  
GENERAL INFORMATION:  
APPLICANT: Beinkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28341/6280M  
CURRENT APPLICATION NUMBER: US/09/869,414  
CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-869-414-3

Alignment of: us-10-726-967a-1 x US-09-869-414-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCGGCTGCCCTGGCGACGCGGCTGGGGGGCGCC 113
|||||
38 olenglyleu 41
|||||
114 CTTGGGGCTG 123
```

Sequence name: rnp2ndb:US-09-548-366F-3

Sequence documentation:

Sequence 3, Application US/09548366F  
Patent No. 6797487  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: 28915/6280J  
CURRENT APPLICATION NUMBER: US/09/548,366F  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 3  
LENGTH: 2070  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-366F-3

Alignment of: us-10-726-967a-1 x US-09-548-366F-3 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	34.2
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCATCGGCTGCCCTGGCGACGCGGCTGGGGGGCGCC 113
|||||
38 olenglyleu 41
|||||
114 CTTGGGGCTG 123
```

Sequence name: rnp2ndb:US-09-548-368D-3

Sequence documentation:

Sequence 3, Application US/09548368D  
Patent No. 6825023  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

```

; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-368D-3
```

Alignment of: us-10-726-967a-1 x US-09-548-368D-3 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	34.2	
Matching	length:	20		Total length:	20	
Percent Similarity:	100.00			Percent Identity:	100.00	
Total	Percent Similarity:	100.00		Total	Percent Identity:	100.00
Gaps: 0						

Alignment:

```

22 ThrGlnHisGlyTleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGGCCCC 113
38 olenuGlyLeu
|||||
114 CCTGGGGGCTG
|||
41
123
```

Sequence name: rmlp2ndb:US-09-794-925A-3

Sequence documentation:

```

; Sequence 3, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-925A-3
```

Alignment of: us-10-726-967a-1 x US-09-794-925A-3 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	34.2	
Matching	length:	20		Total length:	20	
Percent Similarity:	100.00			Percent Identity:	100.00	
Total	Percent Similarity:	100.00		Total	Percent Identity:	100.00
Gaps: 0						

Alignment:

```

22 ThrGlnHisGlyTleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGGCCCC 113
38 olenuGlyLeu
|||||
114 CCTGGGGGCTG
|||
41
123
```

Sequence name: rmlp2ndb:US-09-806-194A-3

Sequence documentation:

```

; Sequence 3, Application US/09806194A
; Patent No. 683565
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikeon, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: Alzheimer's Disease Secretase
; FILE REFERENCE: 6177.P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; PRIOR FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 2070
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-806-194A-3
```

Alignment of: us-10-726-967a-1 x US-09-806-194A-3 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	34.2	
Matching	length:	20		Total length:	20	
Percent Similarity:	100.00			Percent Identity:	100.00	
Total	Percent Similarity:	100.00		Total	Percent Identity:	100.00
Gaps: 0						

Alignment:

```

22 ThrGlnHisGlyTleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGGCCCC 113
38 olenuGlyLeu
|||||
114 CCTGGGGGCTG
|||
41
123
```

Sequence name: rmlp2ndb:US-09-724-566A-42

Sequence documentation:

```

; Sequence 42, Application US/09724566A
; Patent No. 6627739
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basi, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
```

APPLICANT: John, Varghese  
APPLICANT: Power, Michael  
APPLICANT: Sinha, Sukanto  
APPLICANT: Tatsuno, Gwen  
APPLICANT: Tung, Jay  
APPLICANT: Wang, Shuwen  
APPLICANT: McConlogue, Lisa  
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and  
FILE REFERENCE: 228-US-NEMC2  
CURRENT APPLICATION NUMBER: US/09/724,566A  
CURRENT FILING DATE: 2000-11-28  
PRIOR APPLICATION NUMBER: US 09/501,708  
PRIOR FILING DATE: 2000-02-10  
PRIOR APPLICATION NUMBER: 60/119,571  
PRIOR FILING DATE: 1999-02-10  
PRIOR APPLICATION NUMBER: 60/139,172  
PRIOR FILING DATE: 1999-06-15  
NUMBER OF SEQ ID NOS: 104  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 43  
LENGTH: 2348  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-724-566A-42

Alignment of: us-10-726-967a-1 x US-09-724-566A-42 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Base:	34.8
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
369 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGGGGGCGCC 418  
38 OleuGlyLeu 41  
|||||  
419 CCTGGGGCTG 428

Sequence name: rnp2ndb:US-09-724-566A-44

Sequence documentation:

Sequence 44, Application US/09724566A  
Patent No. 6627739  
GENERAL INFORMATION:  
APPLICANT: Anderson, John P.  
APPLICANT: Basi, Guripal  
APPLICANT: Doane, Minh Tam  
APPLICANT: Frigon, No. 6627739mand  
APPLICANT: John, Varghese  
APPLICANT: Power, Michael  
APPLICANT: Sinha, Sukanto  
APPLICANT: Tatsuno, Gwen  
APPLICANT: Tung, Jay  
APPLICANT: Wang, Shuwen  
APPLICANT: McConlogue, Lisa  
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and  
FILE REFERENCE: 228-US-NEMC2  
CURRENT APPLICATION NUMBER: US/09/724,566A  
CURRENT FILING DATE: 2000-11-28  
PRIOR APPLICATION NUMBER: US 09/501,708  
PRIOR FILING DATE: 2000-02-10  
PRIOR APPLICATION NUMBER: 60/119,571  
PRIOR FILING DATE: 1999-02-10  
PRIOR APPLICATION NUMBER: 60/139,172

PRIOR FILING DATE: 1999-06-15  
NUMBER OF SEQ ID NOS: 104  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 44  
LENGTH: 2348  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-724-566A-44

Alignment of: us-10-726-967a-1 x US-09-724-566A-44 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Base:	34.8
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
369 ACCGACGACGGCATCCGGCTGCCCTGGCGACGGCGGGGGCGCC 418  
38 OleuGlyLeu 41  
|||||  
419 CCTGGGGCTG 428

Sequence name: rnp2ndb:US-09-471-669A-42

Sequence documentation:

Sequence 42, Application US/09471669A  
Patent No. 6830918  
GENERAL INFORMATION:  
APPLICANT: Anderson, John P.  
APPLICANT: Basi, Guripal  
APPLICANT: Doane, Minh Tam  
APPLICANT: Frigon, No. 6830918mand  
APPLICANT: John, Varghese  
APPLICANT: Power, Michael  
APPLICANT: Sinha, Sukanto  
APPLICANT: Tatsuno, Gwen  
APPLICANT: Tung, Jay  
APPLICANT: Wang, Shuwen  
APPLICANT: McConlogue, Lisa  
APPLICANT: Ekan Pharmaceuticals, Inc.  
TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS  
FILE REFERENCE: 015270-006430US  
CURRENT APPLICATION NUMBER: US/09/471,669A  
CURRENT FILING DATE: 1999-12-24  
PRIOR APPLICATION NUMBER: US 60/114,408  
PRIOR FILING DATE: 1998-12-31  
PRIOR APPLICATION NUMBER: US 60/119,571  
PRIOR FILING DATE: 1999-02-10  
PRIOR APPLICATION NUMBER: US 60/139,172  
PRIOR FILING DATE: 1999-06-15  
NUMBER OF SEQ ID NOS: 108  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 42  
LENGTH: 2348  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-471-669A-42

Alignment of: us-10-726-967a-1 x US-09-471-669A-42 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Base:	34.8
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment: Gaps: 0

```
22 ThGlnHieGly11leArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||
369 ACCCAGCAGCGGATCCGGCTGCCCTGCGCAGCGGCGGCGGCCGCC 418
|||
38 olLeuGlyLeu 41
|||
419 CCGGGGCGCTG 428
```

Sequence name: rmlp2ndb:US-09-471-669A-44

Sequence documentation:

```
; Sequence 44, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Baal, Gurigbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Vargheese
; APPLICANT: Power, Michael
; APPLICANT: Simha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; APPLICANT: Elan Pharmaceuticals, Inc.
; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
; FILE REFERENCE: 015270-006430US
; CURRENT FILING DATE: 1999-12-24
; PRIOR FILING DATE: 1998-12-31
; PRIOR APPLICATION NUMBER: US 60/114,408
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: US 60/119,571
; PRIOR FILING DATE: 1999-06-15
; PRIOR APPLICATION NUMBER: US 60/139,172
; NUMBER OF SEQ ID NOS: 108
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 44
; LENGTH: 2348
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-471-669A-44
```

Alignment of: us-10-726-967a-1 x US-09-471-669A-44 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	34.8
Matching Length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThGlnHieGly11leArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||
369 ACCCAGCAGCGGATCCGGCTGCCCTGCGCAGCGGCGGCGGCCGCC 418
|||
38 olLeuGlyLeu 41
|||
419 CCGGGGCGCTG 428
```

Sequence name: rmlp2ndb:US-09-009-191-1

Sequence documentation:

```
; Sequence 1, Application US/09009191
; Patent No. 6319689
```

GENERAL INFORMATION:

```
; APPLICANT: POWELL, DAVID
; APPLICANT: CHAPMAN, CONRAD
; APPLICANT: MURPHY, KAY
; APPLICANT: SMITH, TRUDI
; TITLE OF INVENTION: ASP2
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: RATNER & PRESTIA
; STREET: P.O. BOX 980
; CITY: VALLEY FORGE
; STATE: PA
; COUNTRY: USA
; ZIP: 19482
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; FILING DATE: 20-JAN-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: UK 9701684.4
; FILING DATE: 28-JAN-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: PRESTIA, PAUL F
; REGISTRATION NUMBER: 23,031
; REFERENCE/DOCKET NUMBER: GH-70368
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 610-407-0700
; TELEFAX: 610-407-0701
; TELEX: 846169
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2541 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; US-09-009-191-1
```

Alignment of: us-10-726-967a-1 x US-09-009-191-1 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	35.2
Matching Length:	20		Total length:	20	
Matching Percent Similarity:	100.00		Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00		Total Percent Identity:	100.00	
Gaps:	0				

Alignment:

```
22 ThGlnHieGly11leArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||
64 ACCCAGCAGCGGATCCGGCTGCCCTGCGCAGCGGCGGCGGCCGCC 113
|||
38 olLeuGlyLeu 41
|||
114 CCGGGGCGCTG 123
```

Sequence name: rmlp2ndb:US-09-604-608-1

Sequence documentation:

```
; Sequence 1, Application US/09604608
; Patent No. 6545127
; GENERAL INFORMATION:
; APPLICANT: Tang, Jordan J.N.
; APPLICANT: Lin, Xinli
; APPLICANT: Koelsch, Gerald
; TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
```

TITLE OF INVENTION: of Use Thereof  
FILE REFERENCE: OMRP 179  
CURRENT APPLICATION NUMBER: US/09/604,608  
CURRENT FILING DATE: 2000-06-27  
PRIOR APPLICATION NUMBER: 60/141,363  
PRIOR FILING DATE: 1999-06-28  
PRIOR APPLICATION NUMBER: 60/168,060  
PRIOR FILING DATE: 1999-11-30  
PRIOR APPLICATION NUMBER: 60/177,836  
PRIOR FILING DATE: 2000-01-25  
PRIOR APPLICATION NUMBER: 60/178,368  
PRIOR FILING DATE: 2000-01-27  
PRIOR APPLICATION NUMBER: 60/210,292  
PRIOR FILING DATE: 2000-06-08  
NUMBER OF SEQ ID NOS: 31  
SOFTWARE: Patent In Ver. 2.1  
SEQ ID NO 1  
LENGTH: 3252  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-604-608-1

Alignment of: us-10-726-967a-1 x US-09-604-608-1 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	36.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
25 ACCGAGCAGCGCATCCGCTGCGCCCTGCGCAGCGGCTGGGGGCGCCCC 74
|||||
38 OleuGlyLeu 41
|||||
75 CCTGGGGGCTG 84
```

Sequence name: rn1p2ndb:US-09-949-016-4382

Sequence documentation:

Sequence 4382, Application US/09949016  
Patent No. 6812339  
GENERAL INFORMATION:  
APPLICANT: VENTER, J. Craig et al.  
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED  
WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF  
FILE REFERENCE: C1001307  
CURRENT APPLICATION NUMBER: US/09/949,016  
CURRENT FILING DATE: 2000-04-14  
PRIOR APPLICATION NUMBER: 60/241,755  
PRIOR FILING DATE: 2000-10-20  
PRIOR APPLICATION NUMBER: 60/237,768  
PRIOR FILING DATE: 2000-10-03  
PRIOR APPLICATION NUMBER: 60/231,498  
PRIOR FILING DATE: 2000-09-08  
NUMBER OF SEQ ID NOS: 207012  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 4382  
LENGTH: 5825  
TYPE: DNA  
ORGANISM: Human  
US-09-949-016-4382

Alignment of: us-10-726-967a-1 x US-09-949-016-4382 ..

Alignment segment 1/1: (+)

Quality: 104.00

Score: 39.2

Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
515 ACCGAGCAGCGCATCCGCTGCGCCCTGCGCAGCGGCTGGGGGCGCCCC 564
|||||
38 OleuGlyLeu 41
|||||
565 CCTGGGGGCTG 574
```

Sequence name: rn1p2ndb:US-09-949-016-939

Sequence documentation:

Sequence 939, Application US/09949016  
Patent No. 6812339  
GENERAL INFORMATION:  
APPLICANT: VENTER, J. Craig et al.  
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED  
WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF  
FILE REFERENCE: C1001307  
CURRENT APPLICATION NUMBER: US/09/949,016  
CURRENT FILING DATE: 2000-04-14  
PRIOR APPLICATION NUMBER: 60/241,755  
PRIOR FILING DATE: 2000-10-20  
PRIOR APPLICATION NUMBER: 60/237,768  
PRIOR FILING DATE: 2000-10-03  
PRIOR APPLICATION NUMBER: 60/231,498  
PRIOR FILING DATE: 2000-09-08  
NUMBER OF SEQ ID NOS: 207012  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 939  
LENGTH: 5878  
TYPE: DNA  
ORGANISM: Human  
US-09-949-016-939

Alignment of: us-10-726-967a-1 x US-09-949-016-939 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	39.3
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
518 ACCGAGCAGCGCATCCGCTGCGCCCTGCGCAGCGGCTGGGGGCGCCCC 567
|||||
38 OleuGlyLeu 41
|||||
568 CCTGGGGGCTG 577
```

Sequence name: rn1p2ndb:US-09-724-566a-48

Sequence documentation:

Sequence 48, Application US/09724566a  
Patent No. 6627739  
GENERAL INFORMATION:  
APPLICANT: Anderson, John P.  
APPLICANT: Basi, Guripal  
APPLICANT: Doane, Minh Tam  
APPLICANT: Frigon, No. 6627739mand  
APPLICANT: John, Varghese  
APPLICANT: Power, Michael

APPLICANT: Sinha, Sukanto  
APPLICANT: Tatsuono, Gwen  
APPLICANT: Wang, Jay  
APPLICANT: Wang, Shuwen  
APPLICANT: McConlogue, Lisa  
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and  
FILE REFERENCE: 228-US-NEWC2  
CURRENT APPLICATION NUMBER: US/09/724,566A  
CURRENT FILING DATE: 2000-11-28  
PRIOR APPLICATION NUMBER: US 09/501,708  
PRIOR FILING DATE: 2000-02-10  
PRIOR APPLICATION NUMBER: 60/119,571  
PRIOR FILING DATE: 1999-02-10  
PRIOR APPLICATION NUMBER: 60/139,172  
PRIOR FILING DATE: 1999-06-15  
NUMBER OF SEQ ID NOS: 104  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 48  
LENGTH: 16080  
TYPE: DNA  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Expression Vector pCEK  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: (1)..(16080)  
OTHER INFORMATION: n = A,T,C or G  
US-09-724-566A-48

Alignment of: us-10-726-967a-1 x US-09-724-566A-48 ..

Alignment segment 1/1: (+)  
Matching length: 104.00  
Matching Percent Similarity: 100.00  
Total length: 44.7  
Total Percent Identity: 20  
Total Percent Similarity: 100.00  
Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
1738 ACCGACGACGGCATCCGCTGCCCTGGCGACGCGCTGGGGGGCGCCCC 1787  
38 OleuGlyLeu 41  
1788 CTTGGGGGCTG 1797

Sequence name: rnp2ndb:US-09-471-669A-48

Sequence documentation:  
Sequence 48, Application US/09471669A  
Patent No. 6830918  
GENERAL INFORMATION:  
APPLICANT: Anderson, John P.  
APPLICANT: Basi, Gurigopal  
APPLICANT: Doane, Minh Tam  
APPLICANT: Frigon, No. 6830918mand  
APPLICANT: John, Varghese  
APPLICANT: Power, Michael  
APPLICANT: Sinha, Sukanto  
APPLICANT: Tatsuono, Gwen  
APPLICANT: Tungs, Jay  
APPLICANT: Wang, Shuwen  
APPLICANT: McConlogue, Lisa  
TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS  
FILE REFERENCE: 015270-006430US  
CURRENT APPLICATION NUMBER: US/09/471,669A  
CURRENT FILING DATE: 1999-12-24  
PRIOR APPLICATION NUMBER: US 60/114,408

PRIOR FILING DATE: 1998-12-31  
PRIOR APPLICATION NUMBER: US 60/119,571  
PRIOR FILING DATE: 1999-02-10  
PRIOR APPLICATION NUMBER: US 60/139,172  
PRIOR FILING DATE: 1999-06-15  
NUMBER OF SEQ ID NOS: 108  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 48  
LENGTH: 16080  
TYPE: DNA  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Expression  
OTHER INFORMATION: vector pCEK  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: (1)..(16080)  
OTHER INFORMATION: n = a, c, g, or t.  
US-09-471-669A-48

Alignment of: us-10-726-967a-1 x US-09-471-669A-48 ..

Alignment segment 1/1: (+)  
Matching length: 104.00  
Matching Percent Similarity: 100.00  
Total length: 44.7  
Total Percent Identity: 20  
Total Percent Similarity: 100.00  
Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
1738 ACCGACGACGGCATCCGCTGCCCTGGCGACGCGCTGGGGGGCGCCCC 1787  
38 OleuGlyLeu 41  
1788 CTTGGGGGCTG 1797

Sequence name: rnp2ndb:US-09-713-158-1

Sequence documentation:  
Sequence 1, Application US/09713158  
Patent No. 6361975  
GENERAL INFORMATION:  
APPLICANT: ZHU, YUAN  
APPLICANT: LI, XIATONG  
APPLICANT: FOWELL, DAVID J.  
APPLICANT: CHRISTIE, GARY  
TITLE OF INVENTION: MOUSE ASPARTIC SECRETASE-2 (MASP-2)  
FILE REFERENCE: GP-70660  
CURRENT APPLICATION NUMBER: US/09/713,158  
CURRENT FILING DATE: 2000-11-15  
PRIOR APPLICATION NUMBER: 60/165,800  
PRIOR FILING DATE: 1999-11-16  
NUMBER OF SEQ ID NOS: 2  
SOFTWARE: FastSeq for Windows Version 3.0  
SEQ ID NO 1  
LENGTH: 1506  
TYPE: DNA  
ORGANISM: MUS MUSCULUS  
US-09-713-158-1

Alignment of: us-10-726-967a-1 x US-09-713-158-1 ..

Alignment segment 1/1: (+)  
Matching length: 77.00  
Matching Percent Similarity: 90.00  
Total length: 83  
Total Percent Identity: 20  
Total Percent Similarity: 90.00  
Total Percent Identity: 80.00  
Gaps: 0



## Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLys 38
      |||:::|||||
64 ACCCATCTCGCATCCGGCTGCCCTTCCAGCGGCGCTGGCAGGGCCACC 113
      |||:::|||||
38 OleuGlyLeu 41
      |||:::|||||
114 CTTGGGCGCTG 123
```

Sequence name: rnp2ndb:US-09-548-372D-7

## Sequence documentation:

```
; Sequence 7, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US/09/548,372D
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-09-548-372D-7
```

Alignment of: us-10-726-967a-1 x US-09-548-372D-7 ..

## Alignment segment 1/1: (+)

	Quality:	77.00		Score:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

## Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLys 38
      |||:::|||||
64 ACCCATCTCGCATCCGGCTGCCCTTCCAGCGGCGCTGGCAGGGCCACC 113
      |||:::|||||
38 OleuGlyLeu 41
      |||:::|||||
114 CTTGGGCGCTG 123
```

Sequence name: rnp2ndb:US-09-548-367D-7

## Sequence documentation:

```
; Sequence 7, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US/09/548,367D
; PRIOR FILING DATE: 1999-09-23
```

```
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-09-548-367D-7
```

Alignment of: us-10-726-967a-1 x US-09-548-367D-7 ..

## Alignment segment 1/1: (+)

	Quality:	77.00		Score:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

## Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLys 38
      |||:::|||||
64 ACCCATCTCGCATCCGGCTGCCCTTCCAGCGGCGCTGGCAGGGCCACC 113
      |||:::|||||
38 OleuGlyLeu 41
      |||:::|||||
114 CTTGGGCGCTG 123
```

Sequence name: rnp2ndb:US-09-551-853D-7

## Sequence documentation:

```
; Sequence 7, Application US/09551853D
; Patent No. 6506667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT FILING DATE: US/09/551,853D
; CURRENT FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-09-551-853D-7
```

Alignment of: us-10-726-967a-1 x US-09-551-853D-7 ..

## Alignment segment 1/1: (+)

	Quality:	77.00		Score:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

## Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACGCGGCTGGCAGGGCCACC 113
38 oLeuGlyLeu
|||||
114 CTGGGGCCTG 123
```

Sequence name: rmlp2ndb:US-09-416-901B-7

Sequence documentation:

Sequence 7, Application US/09416901B

Patent No. 669671

GENERAL INFORMATION:

APPLICANT: GURNEY ET AL.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

TITLE OF INVENTION: THEREOF

FILE REFERENCE: 29915/6280A

CURRENT FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: US 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 72

SOFTWARE: Patentin version 3.1

SEQ ID NO 7

LENGTH: 2043

TYPE: DNA

ORGANISM: Mus musculus

US-09-416-901B-7

Alignment of: us-10-726-967a-1 x US-09-416-901B-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00		Score:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACGCGGCTGGCAGGGCCACC 113
38 oLeuGlyLeu
|||||
114 CTGGGGCCTG 123
```

Sequence name: rmlp2ndb:US-09-548-376D-7

Sequence documentation:

Sequence 7, Application US/09548376D

Patent No. 6706485

GENERAL INFORMATION:

APPLICANT: GURNEY ET AL.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR

TITLE OF INVENTION: AND USES

TITLE OF INVENTION: THEREOF

FILE REFERENCE: 29915/6280F

CURRENT FILING DATE: 2000-04-12

PRIOR APPLICATION NUMBER: US 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 09/404,133

```
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: US 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 72
;; SOFTWARE: Patentin version 3.1
;; SEQ ID NO 7
;; LENGTH: 2043
;; TYPE: DNA
;; ORGANISM: Mus musculus
US-09-548-376D-7
```

Alignment of: us-10-726-967a-1 x US-09-548-376D-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00		Score:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACGCGGCTGGCAGGGCCACC 113
38 oLeuGlyLeu
|||||
114 CTGGGGCCTG 123
```

Sequence name: rmlp2ndb:US-09-794-927A-7

Sequence documentation:

Sequence 7, Application US/09794927A

Patent No. 6727074

GENERAL INFORMATION:

APPLICANT: Gurney et al.

TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

TITLE OF INVENTION: Therefor

FILE REFERENCE: 29915/6280FG

CURRENT FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 74

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 7

LENGTH: 2043

TYPE: DNA

ORGANISM: Mus musculus

US-09-794-927A-7

Alignment of: us-10-726-967a-1 x US-09-794-927A-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00		Score:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

## Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeuPr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGCACAGCGGCTGGCAGGGCCACC 113
|||||
38 GLeuGlyLeu 41
|||||
114 CCTGGGCGCTG 123
```

Sequence name: rnp2ndb:US-09-548-373D-7

## Sequence documentation:

```
; Sequence 7, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 28915/6280B
; CURRENT APPLICATION NUMBER: US/09/548,373D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
; US-09-548-373D-7
```

Alignment of: us-10-726-967a-1 x US-09-548-373D-7 ..

## Alignment segment 1/1: (+)

	Quality:	77.00		Basecore:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

## Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeuPr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGCACAGCGGCTGGCAGGGCCACC 113
|||||
38 GLeuGlyLeu 41
|||||
114 CCTGGGCGCTG 123
```

Sequence name: rnp2ndb:US-09-795-847B-7

## Sequence documentation:

```
; Sequence 7, Application US/09795847B
; Patent No. 673163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280D
; CURRENT APPLICATION NUMBER: US/09/795,847B
```

```
;; CURRENT FILING DATE: 2001-02-28
;; PRIOR APPLICATION NUMBER: 09/416,901
;; PRIOR FILING DATE: 1999-10-13
;; PRIOR APPLICATION NUMBER: 60/155,493
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 09/404,133
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: PCT/US99/20881
;; PRIOR FILING DATE: 1999-09-23
;; PRIOR APPLICATION NUMBER: 60/101,594
;; PRIOR FILING DATE: 1998-09-24
;; NUMBER OF SEQ ID NOS: 74
;; SOFTWARE: Patentin Ver. 2.0
;; SEQ ID NO 7
;; LENGTH: 2043
;; TYPE: DNA
;; ORGANISM: Mus musculus
; US-09-795-847B-7
```

Alignment of: us-10-726-967a-1 x US-09-795-847B-7 ..

## Alignment segment 1/1: (+)

	Quality:	77.00		Basecore:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

## Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeuPr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGCACAGCGGCTGGCAGGGCCACC 113
|||||
38 GLeuGlyLeu 41
|||||
114 CCTGGGCGCTG 123
```

Sequence name: rnp2ndb:US-09-869-414-7

## Sequence documentation:

```
; Sequence 7, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
; US-09-869-414-7
```

Alignment of: us-10-726-967a-1 x US-09-869-414-7 ..

## Alignment segment 1/1: (+)

Quality: 77.00      EScore: 86  
Matching length: 20      Total length: 20  
Matching Percent Similarity: 90.00      Matching Percent Identity: 80.00  
Total Percent Similarity: 90.00      Total Percent Identity: 80.00  
Gaps: 0

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACGCGGCTGCGAGGCCACC 113
38 OleuGlyLeu
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rni2ndb:US-09-548-366F-7

Sequence documentation:

```
; Sequence 7, Application US/09548366F
; Patent No. 6797487
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 29915/6280J
; CURRENT APPLICATION NUMBER: US/09/548,366F
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-09-548-366F-7
```

Alignment of: us-10-726-967a-1 x US-09-548-366F-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00		EScore:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACGCGGCTGCGAGGCCACC 113
38 OleuGlyLeu
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rni2ndb:US-09-548-368D-7

Sequence documentation:

```
; Sequence 7, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREFOR
```

```
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-09-548-368D-7
```

Alignment of: us-10-726-967a-1 x US-09-548-368D-7 ..

Alignment segment 1/1: (+)

	Quality:	77.00		EScore:	86
Matching length:	20		Total length:	20	
Matching Percent Similarity:	90.00		Matching Percent Identity:	80.00	
Total Percent Similarity:	90.00		Total Percent Identity:	80.00	
Gaps:	0				

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGCATCCGGCTGCCCTTCGACGCGGCTGCGAGGCCACC 113
38 OleuGlyLeu
|||||
114 CCGGGGCGCTG 123
```

Sequence name: rni2ndb:US-09-794-925A-7

Sequence documentation:

```
; Sequence 7, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
US-09-794-925A-7
```

Alignment of: us-10-726-967a-1 x US-09-794-925A-7 ..

Alignment segment 1/1: (+)

Quality: 77.00      Base: 86  
Matching length: 20      Total length: 20  
Matching Percent Similarity: 90.00      Matching Percent Identity: 80.00  
Total Percent Similarity: 90.00      Total Percent Identity: 80.00  
Gaps: 0

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38  
|||||  
64 ACCCATCTCGGATCGGCTGCCCTTCGACGCGGCTGGCAGGCGCAC 113  
|||  
38 OLeuGlyLeu 41  
|||||  
114 CTTGGGCGCTG 123

Sequence name: rnp2ndb:US-09-806-194A-7

## Sequence documentation:

; Sequence 7, Application US/09806194A  
; Patent No. 6835565  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heinrikson, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; APPLICANT: Pharmacia & Upjohn Company  
; TITLE OF INVENTION: Alzheimer's Disease Secretase  
; FILE REFERENCE: 6177.P CP  
; CURRENT APPLICATION NUMBER: US/09/806,194A  
; PRIOR FILING DATE: 2001-09-17  
; PRIOR APPLICATION NUMBER: 60/101,594  
; NUMBER OF SEQ ID NOS: 49  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 7  
; LENGTH: 2043  
; TYPE: DNA  
; ORGANISM: Mus musculus  
; US-09-806-194A-7

Alignment of: us-10-726-967a-1 x US-09-806-194A-7

## Alignment segment 1/1: (+)

Quality: 77.00      Base: 86  
Matching length: 20      Total length: 20  
Matching Percent Similarity: 90.00      Matching Percent Identity: 80.00  
Total Percent Similarity: 90.00      Total Percent Identity: 80.00  
Gaps: 0

## Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38  
|||||  
64 ACCCATCTCGGATCGGCTGCCCTTCGACGCGGCTGGCAGGCGCAC 113  
|||  
38 OLeuGlyLeu 41  
|||||  
114 CTTGGGCGCTG 123

Sequence name: rnp2ndb:US-09-724-566A-42

## Sequence documentation:

; Sequence 42, Application US/09724566A  
; Patent No. 6627739  
; GENERAL INFORMATION:  
; APPLICANT: Anderson, John P.  
; APPLICANT: Basi, Guripal  
; APPLICANT: Doane, Minh Tam  
; APPLICANT: Frigon, No. 6627739mand  
; APPLICANT: John, Varghese

APPLICANT: Power, Michael  
APPLICANT: Sinha, Sukanto  
APPLICANT: Tatsuno, Gwen  
APPLICANT: Tung, Jay  
APPLICANT: Wang, Shuwen  
APPLICANT: McConlogue, Lisa  
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and  
FILE REFERENCE: 228-US-NEWC2  
CURRENT APPLICATION NUMBER: US/09/724,566A  
PRIOR FILING DATE: 2000-11-28  
PRIOR APPLICATION NUMBER: US 09/501,708  
PRIOR FILING DATE: 2000-02-10  
PRIOR APPLICATION NUMBER: 60/119,571  
PRIOR FILING DATE: 1999-02-10  
PRIOR APPLICATION NUMBER: 60/139,172  
PRIOR FILING DATE: 1999-06-15  
NUMBER OF SEQ ID NOS: 104  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 42  
LENGTH: 2348  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-724-566A-42

Alignment of: us-10-726-967a-1 x US-09-724-566A-42

## Alignment segment 1/1: (-)

Quality: 38.00      Base: 237  
Matching length: 14      Total length: 14  
Matching Percent Similarity: 64.29      Matching Percent Identity: 57.14  
Total Percent Similarity: 64.29      Total Percent Identity: 57.14  
Gaps: 0

## Alignment:

25 GlyIleArgLeuProLeuArgSerGlyLeuGlyAlaLeu 38  
|||||  
89 GGGATCCGAGCCCGCTACATCGGACGCGGCGCGACCT 48

Sequence name: rnp2ndb:US-09-724-566A-44

## Sequence documentation:

; Sequence 44, Application US/09724566A  
; Patent No. 6627739  
; GENERAL INFORMATION:  
; APPLICANT: Anderson, John P.  
; APPLICANT: Basi, Guripal  
; APPLICANT: Doane, Minh Tam  
; APPLICANT: Frigon, No. 6627739mand  
; APPLICANT: John, Varghese  
; APPLICANT: Power, Michael  
; APPLICANT: Sinha, Sukanto  
; APPLICANT: Tatsuno, Gwen  
; APPLICANT: Tung, Jay  
; APPLICANT: Wang, Shuwen  
; APPLICANT: McConlogue, Lisa  
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and  
FILE REFERENCE: 228-US-NEWC2  
CURRENT APPLICATION NUMBER: US/09/724,566A  
PRIOR FILING DATE: 2000-11-28  
PRIOR APPLICATION NUMBER: US 09/501,708  
PRIOR FILING DATE: 2000-02-10  
PRIOR APPLICATION NUMBER: 60/119,571  
PRIOR FILING DATE: 1999-02-10  
PRIOR APPLICATION NUMBER: 60/139,172  
PRIOR FILING DATE: 1999-06-15  
NUMBER OF SEQ ID NOS: 104  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 44  
LENGTH: 2348

TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-724-566A-44

Alignment of: us-10-726-967a-1 x US-09-724-566A-44 ..

Alignment segment 1/1: (-)

Quality:	38.00	Score:	237
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 G1Y11eA9LeuProLeuA9Serg1YleuG1Yg1YAlaPro 38  
89 GGGATCCGAGCCCGCTACATCGGCACGCGCGCCAGCCT 48

Sequence name: rnp2ndb:US-09-471-669A-42

Sequence documentation:

Sequence 42, Application US/09471669A  
Patent No. 6830918  
GENERAL INFORMATION:  
APPLICANT: Anderson, John P.  
APPLICANT: Basl, Gurigdal  
APPLICANT: Doane, Minh Tam  
APPLICANT: Frigon, No. 6830918mand  
APPLICANT: John, Varghese  
APPLICANT: Power, Michael  
APPLICANT: Sinha, Sukanto  
APPLICANT: Tatsuno, Gwen  
APPLICANT: Tung, Jay  
APPLICANT: Wang, Shuwen  
APPLICANT: McConlogue, Lisa  
APPLICANT: Elian Pharmaceuticals, Inc.  
TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS  
FILE REFERENCE: 015270-006430US  
CURRENT APPLICATION NUMBER: US/09/471,669A  
CURRENT FILING DATE: 1999-12-24  
PRIOR APPLICATION NUMBER: US 60/114,408  
PRIOR FILING DATE: 1998-12-31  
PRIOR APPLICATION NUMBER: US 60/119,571  
PRIOR FILING DATE: 1999-02-10  
PRIOR APPLICATION NUMBER: US 60/139,172  
PRIOR FILING DATE: 1999-06-15  
NUMBER OF SEQ ID NOS: 108  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 42  
LENGTH: 2348  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-471-669A-42

Alignment of: us-10-726-967a-1 x US-09-471-669A-42 ..

Alignment segment 1/1: (-)

Quality:	38.00	Score:	237
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 G1Y11eA9LeuProLeuA9Serg1YleuG1Yg1YAlaPro 38  
89 GGGATCCGAGCCCGCTACATCGGCACGCGCGCCAGCCT 48

Sequence name: rnp2ndb:US-09-471-669A-44

Sequence documentation:

Sequence 44, Application US/09471669A  
Patent No. 6830918  
GENERAL INFORMATION:  
APPLICANT: Anderson, John P.  
APPLICANT: Basl, Gurigdal  
APPLICANT: Doane, Minh Tam  
APPLICANT: Frigon, No. 6830918mand  
APPLICANT: John, Varghese  
APPLICANT: Power, Michael  
APPLICANT: Sinha, Sukanto  
APPLICANT: Tatsuno, Gwen  
APPLICANT: Tung, Jay  
APPLICANT: Wang, Shuwen  
APPLICANT: McConlogue, Lisa  
APPLICANT: Elian Pharmaceuticals, Inc.  
TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS  
FILE REFERENCE: 015270-006430US  
CURRENT APPLICATION NUMBER: US/09/471,669A  
CURRENT FILING DATE: 1999-12-24  
PRIOR APPLICATION NUMBER: US 60/114,408  
PRIOR FILING DATE: 1998-12-31  
PRIOR APPLICATION NUMBER: US 60/119,571  
PRIOR FILING DATE: 1999-02-10  
PRIOR APPLICATION NUMBER: US 60/139,172  
PRIOR FILING DATE: 1999-06-15  
NUMBER OF SEQ ID NOS: 108  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 44  
LENGTH: 2348  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-471-669A-44

Alignment of: us-10-726-967a-1 x US-09-471-669A-44 ..

Alignment segment 1/1: (-)

Quality:	38.00	Score:	237
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 G1Y11eA9LeuProLeuA9Serg1YleuG1Yg1YAlaPro 38  
89 GGGATCCGAGCCCGCTACATCGGCACGCGCGCCAGCCT 48

Sequence name: rnp2ndb:US-09-949-016-4382

Sequence documentation:

Sequence 4382, Application US/0949016  
Patent No. 6812339  
GENERAL INFORMATION:  
APPLICANT: VENTER, J. Craig et al.  
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF  
FILE REFERENCE: CL001307  
CURRENT APPLICATION NUMBER: US/09/949,016  
CURRENT FILING DATE: 2000-04-14  
PRIOR APPLICATION NUMBER: 60/241,755  
PRIOR FILING DATE: 2000-10-20  
PRIOR APPLICATION NUMBER: 60/237,768  
PRIOR FILING DATE: 2000-10-03  
PRIOR APPLICATION NUMBER: 60/231,498  
PRIOR FILING DATE: 2000-09-08  
NUMBER OF SEQ ID NOS: 207012  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 4382  
LENGTH: 5825

TYPE: DNA  
ORGANISM: Human  
US-09-949-016-4382

Alignment of: us-10-726-967a-1 x US-09-949-016-4382 ..

Alignment segment 1/1: (-)

Quality:	35.00	Score:	261
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 GYIIEATGLeuProLeuArgSerGlyLeuGlyAlaPro 38  
235 GGGATCCGGAGCCCGCTACATCGGACGGCGGCCAGCCT 194

Sequence name: rnip2ndb:US-09-949-016-939

Sequence documentation:

Sequence 939, Application US/09949016  
Patent No. 6812339  
GENERAL INFORMATION:  
APPLICANT: VENTER, J. Craig et al.  
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED  
FILE REFERENCE: C1001307  
CURRENT APPLICATION NUMBER: US/09/949, 016  
CURRENT FILING DATE: 2000-04-14  
PRIOR APPLICATION NUMBER: 60/241,755  
PRIOR FILING DATE: 2000-10-20  
PRIOR APPLICATION NUMBER: 60/237,768  
PRIOR FILING DATE: 2000-10-03  
PRIOR APPLICATION NUMBER: 60/231,498  
PRIOR FILING DATE: 2000-09-08  
NUMBER OF SEQ ID NOS: 207012  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 939  
LENGTH: 5878  
TYPE: DNA  
ORGANISM: Human  
US-09-949-016-939

Alignment of: us-10-726-967a-1 x US-09-949-016-939 ..

Alignment segment 1/1: (-)

Quality:	35.00	Score:	261
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 GYIIEATGLeuProLeuArgSerGlyLeuGlyAlaPro 38  
238 GGGATCCGGAGCCCGCTACATCGGACGGCGGCCAGCCT 197

Sequence name: rnip2ndb:US-09-724-566a-48

Sequence documentation:

Sequence 48, Application US/09724566A  
Patent No. 6627739  
GENERAL INFORMATION:  
APPLICANT: Anderson, John P.  
APPLICANT: Basi, Guripbal  
APPLICANT: Doane, Minh Tam  
APPLICANT: Frigon, No. 6627739mand  
APPLICANT: John, Varghese

APPLICANT: Power, Michael  
APPLICANT: Sinha, Sukanto  
APPLICANT: Tatsuno, Gwen  
APPLICANT: Tung, Jay  
APPLICANT: Wang, Shuwen  
APPLICANT: McConlogue, Lisa  
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and  
FILE REFERENCE: 228-US-NMWC2  
CURRENT APPLICATION NUMBER: US/09/724,566A  
CURRENT FILING DATE: 2000-11-28  
PRIOR APPLICATION NUMBER: US 09/501,708  
PRIOR FILING DATE: 2000-02-10  
PRIOR APPLICATION NUMBER: 60/119,571  
PRIOR FILING DATE: 1999-02-10  
PRIOR APPLICATION NUMBER: 60/139,172  
PRIOR FILING DATE: 1999-06-15  
NUMBER OF SEQ ID NOS: 104  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 48  
LENGTH: 16080  
TYPE: DNA  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Expression Vector pCEK  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: (1)..(16080)  
OTHER INFORMATION: n = A,T,C or G  
US-09-724-566a-48

Alignment of: us-10-726-967a-1 x US-09-724-566a-48 ..

Alignment segment 1/1: (-)

Quality:	35.00	Score:	273
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 GYIIEATGLeuProLeuArgSerGlyLeuGlyAlaPro 38  
1458 GGGATCCGGAGCCCGCTACATCGGACGGCGGCCAGCCT 1417

Sequence name: rnip2ndb:US-09-471-669a-48

Sequence documentation:

Sequence 48, Application US/09471669A  
Patent No. 6830918  
GENERAL INFORMATION:  
APPLICANT: Anderson, John P.  
APPLICANT: Basi, Guripbal  
APPLICANT: Doane, Minh Tam  
APPLICANT: Frigon, No. 6830918mand  
APPLICANT: John, Varghese  
APPLICANT: Sinha, Sukanto  
APPLICANT: Tatsuno, Gwen  
APPLICANT: Tung, Jay  
APPLICANT: Wang, Shuwen  
APPLICANT: McConlogue, Lisa  
APPLICANT: Bian Pharmaceuticals, Inc.  
TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS  
FILE REFERENCE: 015270-006430US  
CURRENT APPLICATION NUMBER: US/09/471,669A  
CURRENT FILING DATE: 1999-12-24  
PRIOR APPLICATION NUMBER: US 60/114,408  
PRIOR FILING DATE: 1998-12-31  
PRIOR APPLICATION NUMBER: US 60/119,571  
PRIOR FILING DATE: 1999-02-10

PRIOR APPLICATION NUMBER: US 60/139,172  
PRIOR FILING DATE: 1999-06-15  
NUMBER OF SEQ ID NOS: 108  
SOFTWARE: Patentn Ver. 2.1  
SEQ ID NO 48  
LENGTH: 16080  
TYPE: DNA  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Expression  
OTHER INFORMATION: vector pCEK  
FEATURE:  
NAME/KEY: misc feature  
LOCATION: (1)-(16080)  
OTHER INFORMATION: n = a, c, g, or t.  
US-09-471-669A-48

Alignment of: us-10-726-967a-1 x US-09-471-669A-48 ..

Alignment segment 1/1: (-)

Quality:	35.00	Score:	273
Matching length:	14	Total length:	14
Matching Percent Similarity:	64.29	Matching Percent Identity:	57.14
Total Percent Similarity:	64.29	Total Percent Identity:	57.14
Gaps:	0		

Alignment:

25 GlyTleuProLeuArgSerGlyLeuGlyAlaPro 38  
1458 GGATCCGACCCCGCTACATCGCGCGCGCGCGCT 1417

Sequence name: rnp2ndb:US-09-548-372D-50

Sequence documentation:  
Sequence 50, Application US/09548372D  
Patent No. 6420534  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/548,372D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentn version 3.1  
SEQ ID NO 50  
LENGTH: 1287  
TYPE: DNA  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Hu-Ap2(b) delta TM  
US-09-548-372D-50

Alignment of: us-10-726-967a-1 x US-09-548-372D-50 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
179 AAGTCCCTCCGCGCGGCTCCTCGGCTCT 147

Sequence name: rnp2ndb:US-09-548-367D-50

Sequence documentation:  
Sequence 50, Application US/09548367D  
Patent No. 6440698  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/548,367D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentn version 3.1  
SEQ ID NO 50  
LENGTH: 1287  
TYPE: DNA  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Hu-Ap2(b) delta TM  
US-09-548-367D-50

Alignment of: us-10-726-967a-1 x US-09-548-367D-50 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
179 AAGTCCCTCCGCGCGGCTCCTCGGCTCT 147

Sequence name: rnp2ndb:US-09-551-853D-50

Sequence documentation:  
Sequence 50, Application US/09551853D  
Patent No. 6500667  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/551,853D  
CURRENT FILING DATE: 2000-04-18  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73



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Sequence documentation:
; Sequence 50, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; TITLE OF INVENTION: AND USES
; TITLE OF INVENTION: THEROP
; FILE REFERENCE: 29915/6280P
; CURRENT APPLICATION NUMBER: US/09/548,376D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURES:
; OTHER INFORMATION: Hu-Asp2(b) delta TM
US-09-548-376D-50

Alignment of: us-10-726-967a-1 x US-09-548-376D-50 ..

Alignment segment 1/1: (-)

      Quality:          32.00                Total length:    252
Matching length:       11                    Matching Percent: 54.55
Total Percent Similarity: 81.82              Total Percent Identity: 54.55
Gaps:                                0

Alignment:
27 ArgLeuProIeuArgSerGIyLeuGIyGIyALA        37
:::|||||:::|||||:::|||||:::
179 AAGCTCGCCCTCCGGCCGCCGCTCCTCGGCTCT      147

Sequence name: rnp2ndb:US-09-794-927A-50

Sequence documentation:
; Sequence 50, Application US/09794927A
; Patent No. 6727074
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, App Substrates Therefor and Uses
; TITLE OF INVENTION: Therefor
; FILE REFERENCE: 29915/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence

```

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; FEATURE:
; OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-09-794-927A-50

Alignment of: us-10-726-967a-1 x US-09-794-927A-50 ..
Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 252
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::
179 AAGCTGCCCTCCGCGCGGCTCTCGGCGCTCT

Sequence name: rni2ndb:US-09-548-373D-50

Sequence documentation:
; Sequence 50, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.

Sequence documentation:
; Sequence 50, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 29915/6280B
; CURRENT APPLICATION NUMBER: US/09/548, 373D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-09-548-373D-50

Alignment of: us-10-726-967a-1 x US-09-548-373D-50 ..
Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 252
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::
179 AAGCTGCCCTCCGCGCGGCTCTCGGCGCTCT

Sequence name: rni2ndb:US-09-869-414-50

Sequence documentation:
; Sequence 50, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; PRIOR FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial Sequence

; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrikson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847B
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Hu-Asp2 (b) delta TM
US-09-795-847B-50

Alignment of: us-10-726-967a-1 x US-09-795-847B-50 ..
Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 252
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::
179 AAGCTGCCCTCCGCGCGGCTCTCGGCGCTCT

Sequence name: rni2ndb:US-09-869-414-50

Sequence documentation:
; Sequence 50, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; PRIOR FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 50
; LENGTH: 1287
; TYPE: DNA
; ORGANISM: Artificial Sequence
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FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Hu-Ap2(b)  
OTHER INFORMATION: delta TM  
US-09-869-414-50

Alignment of: us-10-726-967a-1 x US-09-869-414-50 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||  
179 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT 147

Sequence name: rnp2ndb:US-09-548-366F-50

Sequence documentation:

Sequence 50, Application US/09548366F  
Patent No. 6797487  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280J  
CURRENT APPLICATION NUMBER: US/09/548,366F  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 50  
LENGTH: 1287  
TYPE: DNA  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Ap2(b) delta TM  
US-09-548-366F-50

Alignment of: us-10-726-967a-1 x US-09-548-366F-50 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||  
179 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT 147

Sequence name: rnp2ndb:US-09-548-368D-50

Sequence documentation:  
Sequence 50, Application US/09548368D  
Patent No. 6825023  
GENERAL INFORMATION:

APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280C  
CURRENT APPLICATION NUMBER: US/09/548,368D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 50  
LENGTH: 1287  
TYPE: DNA  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Ap2(b) delta TM  
US-09-548-368D-50

Alignment of: us-10-726-967a-1 x US-09-548-368D-50 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||  
179 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT 147

Sequence name: rnp2ndb:US-09-794-925A-50

Sequence documentation:

Sequence 50, Application US/09794925A  
Patent No. 6828117  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280H  
CURRENT APPLICATION NUMBER: US/09/794,925A  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 50  
LENGTH: 1287  
TYPE: DNA  
ORGANISM: Artificial sequence  
FEATURE:  
OTHER INFORMATION: Hu-Ap2(b) delta TM  
US-09-794-925A-50

Alignment of: us-10-726-967a-1 x US-09-794-925A-50 ..

## Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT

37  
147

## Sequence name: rn1p2ndb:US-09-548-372D-25

## Sequence documentation:

Sequence 25, Application US/09548372D  
Patent No. 6420534  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
TITLE OF INVENTION: THEREOF  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/548,372D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-372D-25

## Alignment of: us-10-726-967a-1 x US-09-548-372D-25 ..

## Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
119 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT

37  
87

## Sequence name: rn1p2ndb:US-09-548-367D-25

## Sequence documentation:

Sequence 25, Application US/09548367D  
Patent No. 6440698  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
TITLE OF INVENTION: THEREOF  
FILE REFERENCE: 29915/6280H  
CURRENT APPLICATION NUMBER: US/09/548,367D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-367D-25

## Alignment of: us-10-726-967a-1 x US-09-548-367D-25 ..

## Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
119 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT

37  
87

## Sequence name: rn1p2ndb:US-09-551-853D-25

## Sequence documentation:

Sequence 25, Application US/09551853D  
Patent No. 6500667  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
TITLE OF INVENTION: THEREOF  
FILE REFERENCE: 29915/6280L  
CURRENT APPLICATION NUMBER: US/09/551,853D  
CURRENT FILING DATE: 2000-04-18  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-551-853D-25

## Alignment of: us-10-726-967a-1 x US-09-551-853D-25 ..

## Alignment segment 1/1: (-)

Quality:	32.00	Score:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
119 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT

37  
87





```

? PRIOR APPLICATION NUMBER: PCT/US99/20881
? PRIOR FILING DATE: 1999-09-23
? PRIOR APPLICATION NUMBER: US 60/101,594
? PRIOR FILING DATE: 1998-09-24
? NUMBER OF SEQ ID NOS: 73
? SOFTWARE: Patencn version 3.1
? SEQ ID NO: 25
? LENGTH: 1302
? TYPE: DNA
? ORGANISM: Homo sapiens
? US-09-548-366F-25

```

Alignment of: us-10-726-967a-1 x US-09-548-366F-25

Alignment segment 1/1: (-)

Quality:	32.00	EScore:	257
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

**Alignment:**

27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
:::|||||:::|:::|:::  
119 AAGCTGCCCCCTCCGCGGCTCCTCGGCTCT 87

Sequence name: rni\_p2ndb:US-09-548-368D-25

**Sequence documentation:**

Sequence 25 Application US/09548368D  
Patent No. 6825023  
GENERAL INFORMATION:  
APPLICANT: CURNERY, ER AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: THEREOF  
CURRENT APPLICATION NUMBER: US/09/548,368D  
CURRENT FILING DATE: 2000-04-12  
PRIORITY APPLICATION NUMBER: US 60/155,493  
PRIORITY FILING DATE: 1999-09-23  
PRIORITY APPLICATION NUMBER: US 09/404,133  
PRIORITY FILING DATE: 1999-09-23  
PRIORITY APPLICATION NUMBER: PCT/US99/20881  
PRIORITY FILING DATE: 1999-09-23  
PRIORITY APPLICATION NUMBER: US 60/101,594  
PRIORITY FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 25  
LENGTH: 1302  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-368D-25

Alignment of: us-10-726-967a-1 x US-09-548-368D-25

Alignment segment 1/1: (-)

Quality:	32.00	EScore:	252
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

**Alignment:**

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|
119 AAGCTGCCCTCCGACGAGCTCTCGGGCTCT    87

```

Sequence name: rnp2ndb:US-09-794-925A-25

Sequence documentation:

```

: Sequence 25, Application US/09794925A
: Patent No. 6828117
:
: GENERAL INFORMATION:
:   APPLICANT: Gurney et al.
:   TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
:   TITLE OF INVENTION: Therefor
:   FILE REFERENCE: 29915/6280H1
:   CURRENT APPLICATION NUMBER: US/09/794,925A
:   CURRENT FILING DATE: 2001-02-27
:   PRIOR APPLICATION NUMBER: 09/416,901
:   PRIOR FILING DATE: 1999-10-13
:   PRIOR APPLICATION NUMBER: 60/155,493
:   PRIOR FILING DATE: 1999-09-23
:   PRIOR APPLICATION NUMBER: 09/404,133
:   PRIOR FILING DATE: 1999-09-23
:   PRIOR APPLICATION NUMBER: PCT/US99/20881
:   PRIOR FILING DATE: 1999-09-23
:   PRIOR APPLICATION NUMBER: 60/101,594
:   PRIOR FILING DATE: 1998-09-24
:   NUMBER OF SEQ ID NOS: 74
:   SOFTWARE: PatentIn Ver. 2.0
:   SEQ ID NO 25
:   LENGTH: 1302
:   TYPE: DNA
:   ORGANISM: Homo sapiens
:   US-09-794-925A-25

```

Alignment of: us-10-726-967a-1 x US-09-794-925A-25

Alignment segment 1/1: (-)

Quality:	32.00	Escape:	257
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

**Alignment:**

27	ArgLeuProLeuArgSerGlyLeuGlyAla	37
:::		:::
119	AAAGCTGCCCTCCGACCGGCTCTCGGCTCT	87

Sequence name: rni\_p2ndb:US-09-806-194A-25

Sequence documentation:

Sequence 25, Application US/09806194A  
 Patent No. 6835565  
 GENERAL INFORMATION:  
 APPLICANT: Gurney, Mark E.  
 APPLICANT: Blenkowski, Michael J.  
 APPLICANT: Heinrikson, Robert L.  
 APPLICANT: Parodi, Luis A.  
 APPLICANT: Van, Rikiang  
 APPLICANT: Pharmacia & Upjohn Company  
 TITLE OF INVENTION: Alzheimer's Disease Secretase  
 FILE REFERENCE: 6177.P CP  
 CURRENT APPLICATION NUMBER: US/09/806,194A  
 CURRENT FILING DATE: 2001-09-17  
 PRIOR APPLICATION NUMBER: 60/101,594  
 PRIOR FILING DATE: 1998-09-24  
 NUMBER OF SEQ ID NOS: 49  
 SOFTWARE: PatentIn Ver. 2.0  
 SEQ ID NO 25  
 LENGTH: 1302  
 TYPE: DNA  
 ORGANISM: Homo sapiens  
 US-09-806-194A-25

Alignment of: us-10-726-967a-1 x US-09-806-194A-25





## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

37  
147

Sequence name: rnp2ndb:US-09-416-901B-52

## Sequence documentation:

Sequence 52, Application US/09416901B  
Patent No. 669671

GENERAL INFORMATION:

APPLICANT: GURNEY ET AL.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

FILE REFERENCE: 29915/6280A

CURRENT APPLICATION NUMBER: US/09/416,901B

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: US 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 72

SOFTWARE: PatentIn version 3.1

SEQ ID NO 52

LENGTH: 1305

TYPE: DNA

ORGANISM: Artificial sequence

FEATURE:

OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-416-901B-52

Alignment of: us-10-726-967a-1 x US-09-416-901B-52 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Score:	252
Matching Percent Similarity:	81.82	Total length:	11
Total Percent Similarity:	81.82	Matching Percent Identity:	54.55
Gaps:	0	Total Percent Identity:	54.55

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

37  
147

Sequence name: rnp2ndb:US-09-548-376D-52

## Sequence documentation:

Sequence 52, Application US/09548376D  
Patent No. 6706485

GENERAL INFORMATION:

APPLICANT: GURNEY ET AL.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR

FILE REFERENCE: 29915/6280F

CURRENT APPLICATION NUMBER: US/09/548,376D

PRIOR FILING DATE: 2000-04-12

PRIOR APPLICATION NUMBER: US 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1

SEQ ID NO 52

LENGTH: 1305

TYPE: DNA

ORGANISM: Artificial sequence

FEATURE:

OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-548-376D-52

Alignment of: us-10-726-967a-1 x US-09-548-376D-52 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Score:	252
Matching Percent Similarity:	81.82	Total length:	11
Total Percent Similarity:	81.82	Matching Percent Identity:	54.55
Gaps:	0	Total Percent Identity:	54.55

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

37  
147

Sequence name: rnp2ndb:US-09-794-927A-52

## Sequence documentation:

Sequence 52, Application US/09794927A  
Patent No. 6727074

GENERAL INFORMATION:

APPLICANT: GURNEY ET AL.

TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses

FILE REFERENCE: 29915/6280FG

CURRENT APPLICATION NUMBER: US/09/794,927A

PRIOR FILING DATE: 2001-02-27

PRIOR APPLICATION NUMBER: 09/416,901

PRIOR FILING DATE: 1999-10-13

PRIOR APPLICATION NUMBER: 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 09/404,133

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: PCT/US99/20881

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 74

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 52

LENGTH: 1305

TYPE: DNA

ORGANISM: Artificial sequence

FEATURE:

OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-794-927A-52

Alignment of: us-10-726-967a-1 x US-09-794-927A-52 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Score:	252
Matching Percent Similarity:	81.82	Total length:	11
Total Percent Similarity:	81.82	Matching Percent Identity:	54.55
Gaps:	0	Total Percent Identity:	54.55

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT

37  
147

Sequence name: rni2ndb:US-09-548-373D-52

Sequence documentation:

/ Sequence 52, Application US/09548373D

/ Patent No. 6737510

/ GENERAL INFORMATION:

/ APPLICANT: GURNEY ET AL.

/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

/ FILE REFERENCE: 29915/6280B

/ CURRENT APPLICATION NUMBER: US/09/548,373D

/ CURRENT FILING DATE: 2000-04-12

/ PRIOR APPLICATION NUMBER: US 60/155,493

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: US 09/404,133

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: PCT/US99/20881

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: US 60/101,594

/ PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 73

/ SOFTWARE: PatentIn version 3.1

/ SEQ ID NO 52

/ LENGTH: 1305

/ TYPE: DNA

/ ORGANISM: Artificial sequence

/ FEATURE:

/ OTHER INFORMATION: Hu-Asp2 (b) delta TM

/ US-09-548-373D-52

Alignment of: us-10-726-967a-1 x US-09-548-373D-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	252
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla

179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37

147

Sequence name: rni2ndb:US-09-795-847B-52

Sequence documentation:

/ Sequence 52, Application US/09795847B

/ Patent No. 6753163

/ GENERAL INFORMATION:

/ APPLICANT: Gurney, Mark E.

/ APPLICANT: Bienkowski, Michael J.

/ APPLICANT: Heinikson, Robert L.

/ APPLICANT: Parodi, Luis A.

/ APPLICANT: Yan, Ridiang

/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

/ FILE REFERENCE: 28341/6280DE

/ CURRENT APPLICATION NUMBER: US/09/795,847B

/ CURRENT FILING DATE: 2001-02-28

/ PRIOR APPLICATION NUMBER: 09/416,901

/ PRIOR FILING DATE: 1999-10-13

/ PRIOR APPLICATION NUMBER: 60/155,493

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: 09/404,133

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: PCT/US99/20881

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: 60/101,594

/ PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 74

/ SOFTWARE: PatentIn Ver. 2.0

/ SEQ ID NO 52

/ LENGTH: 1305

/ TYPE: DNA

/ ORGANISM: Artificial sequence

/ FEATURE:

/ OTHER INFORMATION: Hu-Asp2 (b) delta TM

/ US-09-795-847B-52

Alignment of: us-10-726-967a-1 x US-09-795-847B-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	252
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla

179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37

147

Sequence name: rni2ndb:US-09-869-414-52

Sequence documentation:

/ Sequence 52, Application US/09869414

/ Patent No. 6790610

/ GENERAL INFORMATION:

/ APPLICANT: Bienkowski et al.

/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES

/ FILE REFERENCE: 28341/6280M

/ CURRENT APPLICATION NUMBER: US/09/869,414

/ CURRENT FILING DATE: 2001-06-27

/ PRIOR APPLICATION NUMBER: 09/416,901

/ PRIOR FILING DATE: 1999-10-13

/ PRIOR APPLICATION NUMBER: 60/155,493

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: 09/404,133

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: PCT/US99/20881

/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: 60/101,594

/ PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 73

/ SOFTWARE: PatentIn Ver. 2.0

/ SEQ ID NO 52

/ LENGTH: 1305

/ TYPE: DNA

/ ORGANISM: Artificial Sequence

/ FEATURE:

/ OTHER INFORMATION: Description of Artificial Sequence: Hu-Asp2 (b)

/ OTHER INFORMATION: delta TM

/ US-09-869-414-52

Alignment of: us-10-726-967a-1 x US-09-869-414-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	252
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla

179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

37

147

179 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

147

Sequence name: nrip2ndb:US-09-548-366F-52

Sequence documentation:

; Sequence 52, Application US/09548366F

; Patent No. 6797487

; GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

; FILE REFERENCE: 29915/6280J

; CURRENT APPLICATION NUMBER: US/09/548,366F

; CURRENT FILING DATE: 2000-04-12

; PRIOR APPLICATION NUMBER: US 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 52

; LENGTH: 1305

; TYPE: DNA

; ORGANISM: Artificial sequence

; FEATURE:

; OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-548-366F-52

Alignment of: us-10-726-967a-1 x US-09-548-366F-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Bscore:	252
Matching length:		11		Total length:	11
Matching Percent Similarity:	81.82		Matching Percent Identity:		54.55
Total Percent Similarity:	81.82		Total Percent Identity:		54.55
Gaps:		0			

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla

37

179 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

147

Sequence name: nrip2ndb:US-09-548-368D-52

Sequence documentation:

; Sequence 52, Application US/09548368D

; Patent No. 6825023

; GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.

; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

; FILE REFERENCE: 29915/6280C

; CURRENT APPLICATION NUMBER: US/09/548,368D

; CURRENT FILING DATE: 2000-04-12

; PRIOR APPLICATION NUMBER: US 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 52

; LENGTH: 1305

; TYPE: DNA

; ORGANISM: Artificial sequence

; FEATURE:

; OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-548-368D-52

Alignment of: us-10-726-967a-1 x US-09-548-368D-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Bscore:	252
Matching length:		11		Total length:	11
Matching Percent Similarity:	81.82		Matching Percent Identity:		54.55
Total Percent Similarity:	81.82		Total Percent Identity:		54.55
Gaps:		0			

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla

37

179 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

147

Sequence name: nrip2ndb:US-09-794-925A-52

Sequence documentation:

; Sequence 52, Application US/09794925A

; Patent No. 6828117

; GENERAL INFORMATION:

; APPLICANT: GURNEY ET AL.

; TITLE OF INVENTION: ALZHEIMER'S Disease Secretase, APP Substrates Therefor and Uses

; FILE REFERENCE: 29915/6280H1

; CURRENT APPLICATION NUMBER: US/09/794,925A

; CURRENT FILING DATE: 2001-02-27

; PRIOR APPLICATION NUMBER: 09/416,901

; PRIOR FILING DATE: 1999-10-13

; PRIOR APPLICATION NUMBER: 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 74

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 52

; LENGTH: 1305

; TYPE: DNA

; ORGANISM: Artificial sequence

; OTHER INFORMATION: Hu-Asp2(b) delta TM

US-09-794-925A-52

Alignment of: us-10-726-967a-1 x US-09-794-925A-52 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Bscore:	252
Matching length:		11		Total length:	11
Matching Percent Similarity:	81.82		Matching Percent Identity:		54.55
Total Percent Similarity:	81.82		Total Percent Identity:		54.55
Gaps:		0			

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla

37

179 AAGCTGCCCCCTCCGGCCGGCTCTCGGGCTCT

147

Sequence name: nrip2ndb:US-09-548-372D-21

Sequence documentation:

; Sequence 21, Application US/09548372D



PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 21  
LENGTH: 1341  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-416-901B-21

Alignment of: us-10-726-967a-1 x US-09-416-901B-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
158 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37  
126

Sequence name: rni2ndb:US-09-548-376D-21

Sequence documentation:  
Sequence 21, Application US/09548376D

Patent No. 6706485  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
TITLE OF INVENTION: AND USES  
TITLE OF INVENTION: THEREOF  
FILE REFERENCE: 29915/6280F  
CURRENT APPLICATION NUMBER: US/09/548,376D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 21  
LENGTH: 1341  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-376D-21

Alignment of: us-10-726-967a-1 x US-09-548-376D-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
158 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37  
126

Sequence name: rni2ndb:US-09-794-927A-21

Sequence documentation:  
Sequence 21, Application US/09794927A

Patent No. 6727074  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
TITLE OF INVENTION: THEREOF  
FILE REFERENCE: 29915/6280F  
CURRENT APPLICATION NUMBER: US/09/794,927A  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 21  
LENGTH: 1341  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-927A-21

Alignment of: us-10-726-967a-1 x US-09-794-927A-21 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
158 AAGCTGCCCTCCGGCCGGCTCTCGGCTCT

37  
126

Sequence name: rni2ndb:US-09-548-373D-21

Sequence documentation:  
Sequence 21, Application US/09548373D

Patent No. 6737510  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
TITLE OF INVENTION: THEREOF  
FILE REFERENCE: 29915/6280B  
CURRENT APPLICATION NUMBER: US/09/548,373D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 21  
LENGTH: 1341  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-373D-21

Alignment of: us-10-726-967a-1 x US-09-548-373D-21 ..

[illegible]



GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
TITLE OF INVENTION: THEREOF  
FILE REFERENCE: 29915/62801  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin version 3.1  
SEQ ID NO 29  
LENGTH: 1362  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-372D-29

Alignment of: us-10-726-967a-1 x US-09-548-372D-29 ..

Matching length:	32.00	Total length:	253
Matching Percent Similarity:	81.82	Matching Percent Identity:	11
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGTGGCCCTCCGGCCGGCTCTCGGGCTCT

37  
147

Sequence name: rni2ndb:US-09-548-367D-29

Sequence documentation:

Sequence 29, Application US/09548367D  
Patent No. 6440698  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
TITLE OF INVENTION: THEREOF  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/548,367D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin version 3.1  
SEQ ID NO 29  
LENGTH: 1362  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-367D-29

Alignment of: us-10-726-967a-1 x US-09-548-367D-29 ..

Matching length:	32.00	Total length:	253
Matching Percent Similarity:	81.82	Matching Percent Identity:	11
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Matching length:	32.00	Total length:	253
Matching Percent Similarity:	81.82	Matching Percent Identity:	11
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGTGGCCCTCCGGCCGGCTCTCGGGCTCT

37  
147

Sequence name: rni2ndb:US-09-551-853D-29

Sequence documentation:

Sequence 29, Application US/09551853D  
Patent No. 6500667  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
TITLE OF INVENTION: THEREOF  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/551,853D  
CURRENT FILING DATE: 2000-04-18  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: Patentin version 3.1  
SEQ ID NO 29  
LENGTH: 1362  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-551-853D-29

Alignment of: us-10-726-967a-1 x US-09-551-853D-29 ..

Alignment segment 1/1: (-)

Matching length:	32.00	Total length:	253
Matching Percent Similarity:	81.82	Matching Percent Identity:	11
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGTGGCCCTCCGGCCGGCTCTCGGGCTCT

37  
147

Sequence name: rni2ndb:US-09-416-901B-29

Sequence documentation:

Sequence 29, Application US/09416901B  
Patent No. 6699671  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
TITLE OF INVENTION: THEREOF  
FILE REFERENCE: 29915/6280A  
CURRENT APPLICATION NUMBER: US/09/416,901B  
CURRENT FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594



; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 72  
; SOFTWARE: Patentin version 3.1  
; SEQ ID NO 29  
; LENGTH: 1362  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-416-901B-29

Alignment of: us-10-726-967a-1 x US-09-416-901B-29 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	253
Matching length:		11	Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyAla  
:::|||||:::|  
179 AAGCTGCCCCCTCCGCGCGCTCTCGGCTCT

37  
147

Sequence name: rnp2ndb:US-09-548-376D-29

Sequence documentation:

; Sequence 29, Application US/09548376D  
; Patent No. 6706485  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
; TITLE OF INVENTION: AND USES  
; FILE REFERENCE: 29915/6280F  
; CURRENT APPLICATION NUMBER: US/09/548,376D  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: Patentin version 3.1  
; SEQ ID NO 29  
; LENGTH: 1362  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-548-376D-29

Alignment of: us-10-726-967a-1 x US-09-548-376D-29 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	253
Matching length:		11	Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyAla  
:::|||||:::|  
179 AAGCTGCCCCCTCCGCGCGCTCTCGGCTCT

37  
147

Sequence name: rnp2ndb:US-09-794-927A-29

Sequence documentation:

; Sequence 29, Application US/09794927A  
; Patent No. 6727074  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280FG  
; CURRENT APPLICATION NUMBER: US/09/794,927A  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO 29  
; LENGTH: 1362  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-794-927A-29

Alignment of: us-10-726-967a-1 x US-09-794-927A-29 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	253
Matching length:		11	Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyAla  
:::|||||:::|  
179 AAGCTGCCCCCTCCGCGCGCTCTCGGCTCT

37  
147

Sequence name: rnp2ndb:US-09-548-373D-29

Sequence documentation:

; Sequence 29, Application US/09548373D  
; Patent No. 6737510  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280B  
; CURRENT APPLICATION NUMBER: US/09/548,373D  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: Patentin version 3.1  
; SEQ ID NO 29  
; LENGTH: 1362  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-548-373D-29

Alignment of: us-10-726-967a-1 x US-09-548-373D-29 ..



Alignment: Gaps: 0

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

37  
147

Sequence name: rnp2ndb:US-09-548-368D-29

Sequence documentation:

; Sequence 29, Application US/09548368D  
; Patent No. 6825023  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280C  
; CURRENT APPLICATION NUMBER: US/09/548,368D  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 29  
; LENGTH: 1362  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-548-368D-29

Alignment of: us-10-726-967a-1 x US-09-548-368D-29 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	253
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

37  
147

Sequence name: rnp2ndb:US-09-794-925A-29

Sequence documentation:

; Sequence 29, Application US/09794925A  
; Patent No. 6828117  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280HT  
; CURRENT APPLICATION NUMBER: US/09/794,925A  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594

; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 29  
; LENGTH: 1362  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-794-925A-29

Alignment of: us-10-726-967a-1 x US-09-794-925A-29 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	253
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

37  
147

Sequence name: rnp2ndb:US-09-806-194A-29

Sequence documentation:

; Sequence 29, Application US/09806194A  
; Patent No. 6835565  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Henriksen, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; APPLICANT: Pharmacia & Upjohn Company  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE  
; FILE REFERENCE: 6177.P CP  
; CURRENT APPLICATION NUMBER: US/09/806,194A  
; CURRENT FILING DATE: 2001-09-17  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 49  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 29  
; LENGTH: 1362  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-806-194A-29

Alignment of: us-10-726-967a-1 x US-09-806-194A-29 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	253
Matching length:	11		Total length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

Alignment:

27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCTCCGGCCGGGCTCTCGGCTCT

37  
147

Sequence name: rnp2ndb:US-09-548-372D-23

Sequence documentation:

; Sequence 23, Application US/09548372D  
; Patent No. 6420534  
; GENERAL INFORMATION:





Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
Gaps: 0

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|||||:::|||||:::  
197 AAGCTGCCCCCTCCGGCGGCTCCTCGGGCTCT

37  
165

Sequence name: rmlp2ndb:US-09-416-901B-31

## Sequence documentation:

/ Sequence 31, Application US/09416901B  
/ Patent No. 6699671  
/ GENERAL INFORMATION:  
/ APPLICANT: GURNEY ET AL.  
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
/ TITLE OF INVENTION: THEROP  
/ FILE REFERENCE: 29915/6280A  
/ CURRENT APPLICATION NUMBER: US/09/416,901B  
/ PRIOR FILING DATE: 1999-10-13  
/ PRIOR APPLICATION NUMBER: US 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: US 09/404,133  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: PCT/US99/20881  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: US 60/101,594  
/ PRIOR FILING DATE: 1998-09-24  
/ NUMBER OF SEQ ID NOS: 72  
/ SOFTWARE: PatentIn version 3.1  
/ SEQ ID NO 31  
/ LENGTH: 1380  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens  
US-09-416-901B-31

Alignment of: us-10-726-967a-1 x US-09-416-901B-31 ..

## Alignment segment 1/1: (-)

	Quality:	32.00		Score:	253
Matching Length:	11		Total Length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|||||:::|||||:::  
197 AAGCTGCCCCCTCCGGCGGCTCCTCGGGCTCT

37  
147

Sequence name: rmlp2ndb:US-09-548-376D-23

## Sequence documentation:

/ Sequence 23, Application US/09548376D  
/ Patent No. 6706485  
/ GENERAL INFORMATION:  
/ APPLICANT: GURNEY ET AL.  
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
/ TITLE OF INVENTION: AND USES  
/ FILE REFERENCE: 29915/6280F  
/ CURRENT APPLICATION NUMBER: US/09/548,376D  
/ PRIOR FILING DATE: 2000-04-12  
/ PRIOR APPLICATION NUMBER: US 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: US 09/404,133  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: PCT/US99/20881  
/ PRIOR FILING DATE: 1999-09-23

/ PRIOR APPLICATION NUMBER: US 60/101,594  
/ PRIOR FILING DATE: 1998-09-24  
/ NUMBER OF SEQ ID NOS: 73  
/ SOFTWARE: PatentIn version 3.1  
/ SEQ ID NO 23  
/ LENGTH: 1380  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens  
US-09-548-376D-23

Alignment of: us-10-726-967a-1 x US-09-548-376D-23 ..

## Alignment segment 1/1: (-)

	Quality:	32.00		Score:	253
Matching Length:	11		Total Length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|||||:::|||||:::  
197 AAGCTGCCCCCTCCGGCGGCTCCTCGGGCTCT

37  
165

Sequence name: rmlp2ndb:US-09-548-376D-31

## Sequence documentation:

/ Sequence 31, Application US/09548376D  
/ Patent No. 6706485  
/ GENERAL INFORMATION:  
/ APPLICANT: GURNEY ET AL.  
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
/ TITLE OF INVENTION: THEROP  
/ FILE REFERENCE: 29915/6280F  
/ CURRENT APPLICATION NUMBER: US/09/548,376D  
/ PRIOR FILING DATE: 2000-04-12  
/ PRIOR APPLICATION NUMBER: US 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: US 09/404,133  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: PCT/US99/20881  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: US 60/101,594  
/ PRIOR FILING DATE: 1998-09-24  
/ NUMBER OF SEQ ID NOS: 73  
/ SOFTWARE: PatentIn version 3.1  
/ SEQ ID NO 31  
/ LENGTH: 1380  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens  
US-09-548-376D-31

Alignment of: us-10-726-967a-1 x US-09-548-376D-31 ..

## Alignment segment 1/1: (-)

	Quality:	32.00		Score:	253
Matching Length:	11		Total Length:	11	
Matching Percent Similarity:	81.82		Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82		Total Percent Identity:	54.55	
Gaps:	0				

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|||||:::|||||:::  
197 AAGCTGCCCCCTCCGGCGGCTCCTCGGGCTCT

37  
147

Sequence name: rmlp2ndb:US-09-794-927A-23

Sequence 31, Application US/095485/JU  
Patent No. 6737510  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
TITLE OF INVENTION: THERMOCP  
FILE REFERENCE: 29915/6280B  
CURRENT APPLICATION NUMBER: US/09/548,373D  
CURRENT FILING DATE: 2000-04-12

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; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-373D-31

Alignment of: us-10-726-967a-1 x US-09-548-373D-31 ..

Alignment segment 1/1: (-)

      Quality: 32.00      Escore: 253
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||:::|||||:::|||||:::
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT      147

Sequence name: rn1p2ndb:US-09-795-847B-23

Sequence documentation:
; Sequence 23, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847B
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-795-847B-23

Alignment of: us-10-726-967a-1 x US-09-795-847B-23 ..

Alignment segment 1/1: (-)

      Quality: 32.00      Escore: 253
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||:::|||||:::|||||:::
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT      147

Sequence name: rn1p2ndb:US-09-869-414-23

Sequence documentation:
; Sequence 23, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
```

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      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||:::|||||:::|||||:::
197 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT      165

Sequence name: rn1p2ndb:US-09-795-847B-31

Sequence documentation:
; Sequence 31, Application US/09795847B
; Patent No. 6753163
; GENERAL INFORMATION:
; APPLICANT: Gurney, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280DE
; CURRENT APPLICATION NUMBER: US/09/795,847B
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-795-847B-31

Alignment of: us-10-726-967a-1 x US-09-795-847B-31 ..

Alignment segment 1/1: (-)

      Quality: 32.00      Escore: 253
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||:::|||||:::|||||:::
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT      147

Sequence name: rn1p2ndb:US-09-869-414-23

Sequence documentation:
; Sequence 23, Application US/09869414
; Patent No. 6790610
; GENERAL INFORMATION:
; APPLICANT: Bienkowski et al.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
; FILE REFERENCE: 28341/6280M
; CURRENT APPLICATION NUMBER: US/09/869,414
; CURRENT FILING DATE: 2001-06-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
```



PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 23  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-869-414-23

Alignment of: us-10-726-967a-1 x US-09-869-414-23 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
197 AAGCTGCCCCCTCCGGCCGGCTCTCGGCTCT  
37  
165

Sequence name: rnp2ndb:US-09-869-414-31

Sequence documentation:

Sequence 31, Application US/09869414  
Patent No. 6790610  
GENERAL INFORMATION:  
APPLICANT: Bejankowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M  
CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: US/09/869,414  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 31  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-869-414-31

Alignment of: us-10-726-967a-1 x US-09-869-414-31 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
179 AAGCTGCCCCCTCCGGCCGGCTCTCGGCTCT  
147

Sequence name: rnp2ndb:US-09-548-366F-23

Sequence documentation:

Sequence 23, Application US/09548366F  
Patent No. 6797487  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280F  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 23  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-366F-23

Alignment of: us-10-726-967a-1 x US-09-548-366F-23 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
197 AAGCTGCCCCCTCCGGCCGGCTCTCGGCTCT  
165

Sequence name: rnp2ndb:US-09-548-366F-31

Sequence documentation:

Sequence 31, Application US/09548366F  
Patent No. 6797487  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280F  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 31  
LENGTH: 1380

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; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-366F-31

Alignment of: us-10-726-967a-1 x US-09-548-366F-31 ..

Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 253
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|||||
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCGCTCT

Sequence name: rn1p2ndb:US-09-548-368D-23

Sequence documentation:
; Sequence 23, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-368D-23

Alignment of: us-10-726-967a-1 x US-09-548-368D-23 ..

Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 253
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|||||
197 AAGCTGCCCCCTCCGCGCGGCTCTCGGCGCTCT

Sequence name: rn1p2ndb:US-09-548-368D-31

Sequence documentation:
; Sequence 31, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREFOR
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; FILE REFERENCE: 29915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 31
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-368D-31

Alignment of: us-10-726-967a-1 x US-09-548-368D-31 ..

Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 253
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
      Gaps: 0

Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||:::|||||
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCGCTCT

Sequence name: rn1p2ndb:US-09-794-925A-23

Sequence documentation:
; Sequence 23, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; TITLE OF INVENTION: Therefor
; FILE REFERENCE: 29915/6280H1
; CURRENT APPLICATION NUMBER: US/09/794,925A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 23
; LENGTH: 1380
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-925A-23

Alignment of: us-10-726-967a-1 x US-09-794-925A-23 ..

Alignment segment 1/1: (-)

      Quality: 32.00      EScore: 253
      Matching length: 11      Total length: 11
      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
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Alignment: Gaps: 0

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
197 AAGTGTCCCTCCGCGGCTCTCGGCTCT

37  
165

Sequence name: rn1p2ndb:US-09-794-925A-31

Sequence documentation:

Sequence 31, Application US/09794925A  
Patent No. 6828117  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280H1  
CURRENT APPLICATION NUMBER: US/09/794,925A  
CURRENT FILING DATE: 2001-02-27  
PRIOR APPLICATION NUMBER: 09/416,901  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 74  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 31  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-794-925A-31

Alignment of: us-10-726-967a-1 x US-09-794-925A-31 ..

Alignment segment 1/1: (-)

Quality:	32.00	Base:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGTGTCCCTCCGCGGCTCTCGGCTCT

37  
147

Sequence name: rn1p2ndb:US-09-806-194A-23

Sequence documentation:

Sequence 23, Application US/09806194A  
Patent No. 6835565  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Blenkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
APPLICANT: Pharmacia & Upjohn Company  
TITLE OF INVENTION: Alzheimer's Disease Secretase  
FILE REFERENCE: 6177.P CP  
CURRENT APPLICATION NUMBER: US/09/806,194A  
CURRENT FILING DATE: 2001-09-17  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 49

SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 23  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-806-194A-23

Alignment of: us-10-726-967a-1 x US-09-806-194A-23 ..

Alignment segment 1/1: (-)

Quality:	32.00	Base:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
197 AAGTGTCCCTCCGCGGCTCTCGGCTCT

37  
165

Sequence name: rn1p2ndb:US-09-806-194A-31

Sequence documentation:

Sequence 31, Application US/09806194A  
Patent No. 6835565  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Blenkowski, Michael J.  
APPLICANT: Heinrichson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
APPLICANT: Pharmacia & Upjohn Company  
TITLE OF INVENTION: Alzheimer's Disease Secretase  
FILE REFERENCE: 6177.P CP  
CURRENT APPLICATION NUMBER: US/09/806,194A  
CURRENT FILING DATE: 2001-09-17  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 49  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 31  
LENGTH: 1380  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-806-194A-31

Alignment of: us-10-726-967a-1 x US-09-806-194A-31 ..

Alignment segment 1/1: (-)

Quality:	32.00	Base:	253
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGTGTCCCTCCGCGGCTCTCGGCTCT

37  
147

Sequence name: rn1p2ndb:US-09-724-566A-1

Sequence documentation:

Sequence 1, Application US/09724566A  
Patent No. 6627739  
GENERAL INFORMATION:  
APPLICANT: Anderson, John P.  
APPLICANT: Basi, Guripal

```

; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6627739mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Simha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
; TITLE OF INVENTION: Methods
; FILE REFERENCE: 228-US-NEWC2
; CURRENT APPLICATION NUMBER: US/09/724,566A
; PRIOR FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US 09/501,708
; PRIOR FILING DATE: 2000-02-10
; PRIOR APPLICATION NUMBER: 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 104
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 1503
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-724-566A-1

Alignment of: us-10-726-967a-1 x US-09-724-566A-1 ..

Alignment segment 1/1: (-)

      Quality:      32.00      Total length:      254
Matching Percent: 81.82      Matching Percent: 81.82
Total Percent Similarity: 81.82      Total Percent Identity: 54.55
Gaps: 0

Alignment:
27 ArgleupProleuArgserGlyLeuGlyGlyA1a      37
:::|||||:::|||||:::|||||:::|||||
179 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT      147

Sequence name: rn1p2ndb:US-09-471-669A-1

Sequence documentation:
; Sequence 1, Application US/09471669A
; Patent No. 6830918
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
; APPLICANT: Basl, Guripbal
; APPLICANT: Doane, Minh Tam
; APPLICANT: Frigon, No. 6830918mand
; APPLICANT: John, Varghese
; APPLICANT: Power, Michael
; APPLICANT: Simha, Sukanto
; APPLICANT: Tatsuno, Gwen
; APPLICANT: Tung, Jay
; APPLICANT: Wang, Shuwen
; APPLICANT: McConlogue, Lisa
; APPLICANT: Ekan Pharmaceuticals, Inc.
; TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
; FILE REFERENCE: 015270-006430US
; CURRENT APPLICATION NUMBER: US/09/471,669A
; PRIOR FILING DATE: 1999-12-24
; PRIOR APPLICATION NUMBER: US 60/114,408
; PRIOR FILING DATE: 1998-12-31
; PRIOR APPLICATION NUMBER: US 60/119,571
; PRIOR FILING DATE: 1999-02-10
; PRIOR APPLICATION NUMBER: US 60/139,172
; PRIOR FILING DATE: 1999-06-15
; NUMBER OF SEQ ID NOS: 108
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; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 1503
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-471-669A-1

Alignment of: us-10-726-967a-1 x US-09-471-669A-1 ..

Alignment segment 1/1: (-)

      Quality:      32.00      Total length:      254
Matching Percent: 81.82      Matching Percent: 81.82
Total Percent Similarity: 81.82      Total Percent Identity: 54.55
Gaps: 0

Alignment:
27 ArgleupProleuArgserGlyLeuGlyGlyA1a      37
:::|||||:::|||||:::|||||:::|||||
179 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT      147

Sequence name: rn1p2ndb:US-09-548-372D-5

Sequence documentation:
; Sequence 5, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1998-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 5
; LENGTH: 1977
; TYPE: DNA
; ORGANISM: Homo sapiens
; US-09-548-372D-5

Alignment of: us-10-726-967a-1 x US-09-548-372D-5 ..

Alignment segment 1/1: (-)

      Quality:      32.00      Total length:      258
Matching Percent: 81.82      Matching Percent: 81.82
Total Percent Similarity: 81.82      Total Percent Identity: 54.55
Gaps: 0

Alignment:
27 ArgleupProleuArgserGlyLeuGlyGlyA1a      37
:::|||||:::|||||:::|||||:::|||||
179 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT      147

Sequence name: rn1p2ndb:US-09-548-367D-5

Sequence documentation:
; Sequence 5, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
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ORGANISM: Homo sapiens  
US-09-795-847B-5

Alignment of: us-10-726-967a-1 x US-09-795-847B-5

Alignment segment 1/1: (-)

Quality:	32.00	Score:	258
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
179 AAGCTGCCCTCCGGCGGCTCTCGGCTCT 147

Sequence name: rni2ndb:US-09-869-414-5

Sequence documentation:

Sequence 5, Application US/09869414  
Patent No. 6790610  
GENERAL INFORMATION:  
APPLICANT: Beinkowski et al.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
FILE REFERENCE: 28341/6280M  
CURRENT FILING DATE: 2001-06-27  
PRIOR APPLICATION NUMBER: US/09/869,414  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: 60/101,594  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-869-414-5

Alignment of: us-10-726-967a-1 x US-09-869-414-5

Alignment segment 1/1: (-)

Quality:	32.00	Score:	258
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
179 AAGCTGCCCTCCGGCGGCTCTCGGCTCT 147

Sequence name: rni2ndb:US-09-548-366F-5

Sequence documentation:

Sequence 5, Application US/09548366F  
Patent No. 6797487  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

TITLE OF INVENTION: THEREOF  
FILE REFERENCE: 29915/6280J

CURRENT APPLICATION NUMBER: US/09/548,366F  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-366F-5

Alignment of: us-10-726-967a-1 x US-09-548-366F-5

Alignment segment 1/1: (-)

Quality:	32.00	Score:	258
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
179 AAGCTGCCCTCCGGCGGCTCTCGGCTCT 147

Sequence name: rni2ndb:US-09-548-368D-5

Sequence documentation:

Sequence 5, Application US/09548368D  
Patent No. 6825023  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280C  
CURRENT APPLICATION NUMBER: US/09/548,368D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 5  
LENGTH: 1977  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-368D-5

Alignment of: us-10-726-967a-1 x US-09-548-368D-5

Alignment segment 1/1: (-)

Quality:	32.00	Score:	258
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCCGCTCCTCGGCTCT

37  
147

Sequence name: rni2ndb:US-09-794-925A-5

## Sequence documentation:

; Sequence 5, Application US/09794925A  
; Patent No. 6828117  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; TITLE OF INVENTION: Therefor  
; FILE REFERENCE: 29915/6280H  
; CURRENT APPLICATION NUMBER: US/09/794, 925A  
; PRIOR FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 5  
; LENGTH: 1977  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-794-925A-5

Alignment of: us-10-726-967a-1 x US-09-794-925A-5 ..

## Alignment segment 1/1: (-)

	Quality:	32.00	Score:	258
Matching length:	11		11	
Matching Percent Similarity:	81.82		54.55	
Total Percent Similarity:	81.82		54.55	
Gaps:	0			
Total Percent Identity:			54.55	

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCCGCTCCTCGGCTCT

37  
147

Sequence name: rni2ndb:US-09-806-194A-5

## Sequence documentation:

; Sequence 5, Application US/09806194A  
; Patent No. 6835565  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Heintzke, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Van, Riqiang  
; APPLICANT: Pharmacia & Upjohn Company  
; TITLE OF INVENTION: Alzheimer's Disease Secretase  
; FILE REFERENCE: 6177.P CP  
; CURRENT APPLICATION NUMBER: US/09/806,194A  
; PRIOR FILING DATE: 2001-09-17  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 49  
; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 5  
; LENGTH: 1977  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-806-194A-5

Alignment of: us-10-726-967a-1 x US-09-806-194A-5 ..

## Alignment segment 1/1: (-)

	Quality:	32.00	Score:	258
Matching length:	11		11	
Matching Percent Similarity:	81.82		54.55	
Total Percent Similarity:	81.82		54.55	
Gaps:	0			
Total Percent Identity:			54.55	

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCCGCTCCTCGGCTCT

37  
147

Sequence name: rni2ndb:US-09-548-372D-3

## Sequence documentation:

; Sequence 3, Application US/09548372D  
; Patent No. 6420534  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; TITLE OF INVENTION: THEREOF  
; FILE REFERENCE: 29915/6280I  
; CURRENT APPLICATION NUMBER: US/09/548,372D  
; PRIOR FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn Version 3.1  
; SEQ ID NO 3  
; LENGTH: 2070  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-548-372D-3

Alignment of: us-10-726-967a-1 x US-09-548-372D-3 ..

## Alignment segment 1/1: (-)

	Quality:	32.00	Score:	258
Matching length:	11		11	
Matching Percent Similarity:	81.82		54.55	
Total Percent Similarity:	81.82		54.55	
Gaps:	0			
Total Percent Identity:			54.55	

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCCGCTCCTCGGCTCT

37  
147

Sequence name: rni2ndb:US-09-548-367D-3

## Sequence documentation:

; Sequence 3, Application US/09548367D  
; Patent No. 6440698  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.



Quality:	32.00	Barcode:	258
Matching length:	11	Total length:	111
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Sequence 3 Application US/09548376D  
Patent No. 6706485  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
TITLE OF INVENTION: AND USES  
FILE REFERENCE: 29915/6280F  
CURRENT APPLICATION NUMBER: US/09/548,376D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/455,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24

/ NUMBER OF SEQ ID NOS: 73  
/ SOFTWARE: PatentIn version 3.1  
/ SEQ ID NO 3  
/ LENGTH: 2070  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens  
US-09-548-376D-3

Alignment of: us-10-726-967a-1 x US-09-548-376D-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	258
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
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179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

Sequence name: rntp2ndb:US-09-794-927A-3

Sequence documentation:

/ Sequence 3, Application US/09794927A  
/ Patent No. 6727074  
/ GENERAL INFORMATION:  
/ APPLICANT: Gurney et al.  
/ TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
/ FILE REFERENCE: 29915/6280FG  
/ CURRENT APPLICATION NUMBER: US/09/794,927A  
/ PRIOR FILING DATE: 2001-02-27  
/ PRIOR APPLICATION NUMBER: 09/416,901  
/ PRIOR FILING DATE: 1999-10-13  
/ PRIOR APPLICATION NUMBER: 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 09/404,133  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: PCT/US99/20881  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 60/101,594  
/ PRIOR FILING DATE: 1998-09-24  
/ NUMBER OF SEQ ID NOS: 74  
/ SOFTWARE: PatentIn Ver. 2.0  
/ SEQ ID NO 3  
/ LENGTH: 2070  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens  
US-09-794-927A-3

Alignment of: us-10-726-967a-1 x US-09-794-927A-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	258
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|||||  
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

Sequence name: rntp2ndb:US-09-548-373D-3

Sequence documentation:

/ Sequence 3, Application US/09548373D  
/ Patent No. 6737510  
/ GENERAL INFORMATION:  
/ APPLICANT: GURNEY ET AL.  
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
/ FILE REFERENCE: 29915/6280B  
/ CURRENT APPLICATION NUMBER: US/09/548,373D  
/ CURRENT FILING DATE: 2000-04-12  
/ PRIOR APPLICATION NUMBER: US 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: US 09/404,133  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: PCT/US99/20881  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: US 60/101,594  
/ PRIOR FILING DATE: 1998-09-24  
/ NUMBER OF SEQ ID NOS: 73  
/ SOFTWARE: PatentIn version 3.1  
/ SEQ ID NO 3  
/ LENGTH: 2070  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens  
US-09-548-373D-3

Alignment of: us-10-726-967a-1 x US-09-548-373D-3 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	258
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|||||  
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT

Sequence name: rntp2ndb:US-09-795-847B-3

Sequence documentation:

/ Sequence 3, Application US/09795847B  
/ Patent No. 6753163  
/ GENERAL INFORMATION:  
/ APPLICANT: Gurney, Mark E.  
/ APPLICANT: Bienkowski, Michael J.  
/ APPLICANT: Heinrichson, Robert L.  
/ APPLICANT: Parodi, Luis A.  
/ APPLICANT: Yan, Riqiang  
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES  
/ FILE REFERENCE: 28341/6280DE  
/ CURRENT APPLICATION NUMBER: US/09/795,847B  
/ CURRENT FILING DATE: 2001-02-28  
/ PRIOR APPLICATION NUMBER: 09/416,901  
/ PRIOR FILING DATE: 1999-10-13  
/ PRIOR APPLICATION NUMBER: 60/155,493  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 09/404,133  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: PCT/US99/20881  
/ PRIOR FILING DATE: 1999-09-23  
/ PRIOR APPLICATION NUMBER: 60/101,594  
/ PRIOR FILING DATE: 1998-09-24  
/ NUMBER OF SEQ ID NOS: 74  
/ SOFTWARE: PatentIn Ver. 2.0  
/ SEQ ID NO 3  
/ LENGTH: 2070  
/ TYPE: DNA  
/ ORGANISM: Homo sapiens



## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT

37  
147

Sequence name: rni2ndb:US-09-794-925A-3

## Sequence documentation:

; Sequence 3, Application US/09794925A  
; Patent No. 6828117  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280H1  
; CURRENT APPLICATION NUMBER: US/09/794, 925A  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 3  
; LENGTH: 2070  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-794-925A-3

Alignment of: us-10-726-967a-1 x US-09-794-925A-3 ..

## Alignment segment 1/1: (-)

	Quality:	32.00		Base:	258
Matching length:		11		Total length:	11
Matching Percent Similarity:		81.82		Matching Percent Identity:	54.55
Total Percent Similarity:		81.82		Total Percent Identity:	54.55
Gaps:		0			

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT

37  
147

Sequence name: rni2ndb:US-09-806-194A-3

## Sequence documentation:

; Sequence 3, Application US/09806194A  
; Patent No. 6835565  
; GENERAL INFORMATION:  
; APPLICANT: Gurney, Mark E.  
; APPLICANT: Bienkowski, Michael J.  
; APPLICANT: Helmricksen, Robert L.  
; APPLICANT: Parodi, Luis A.  
; APPLICANT: Yan, Riqiang  
; APPLICANT: Pharmacia & Upjohn Company  
; TITLE OF INVENTION: Alzheimer's Disease Secretase  
; FILE REFERENCE: 6177.P CP  
; CURRENT APPLICATION NUMBER: US/09/806,194A  
; CURRENT FILING DATE: 2001-09-17  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 49  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 3

; LENGTH: 2070  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-806-194A-3

Alignment of: us-10-726-967a-1 x US-09-806-194A-3 ..

## Alignment segment 1/1: (-)

	Quality:	32.00		Base:	258
Matching length:		11		Total length:	11
Matching Percent Similarity:		81.82		Matching Percent Identity:	54.55
Total Percent Similarity:		81.82		Total Percent Identity:	54.55
Gaps:		0			

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||  
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT

37  
147

Sequence name: rni2ndb:US-09-009-191-1

## Sequence documentation:

; Sequence 1, Application US/09009191  
; Patent No. 6319689  
; GENERAL INFORMATION:  
; APPLICANT: POWELL, DAVID  
; APPLICANT: CHAPMAN, CONRAD  
; APPLICANT: MURPHY, KAY  
; APPLICANT: SMITH, TRUDI  
; TITLE OF INVENTION: ASP2  
; NUMBER OF SEQUENCES: 6  
; CORRESPONDENCE ADDRESS:  
; ADDRESS: RATHER & PRESTIA  
; STREET: P.O. BOX 980  
; CITY: VALLEY Forge  
; STATE: PA  
; COUNTRY: USA  
; ZIP: 19482  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSeq for Windows Version 2.0  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/009,191  
; FILING DATE: 20-JAN-1998  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: UK 9701684.4  
; FILING DATE: 28-JAN-1997  
; ATTORNEY/AGENT INFORMATION:  
; NAME: PRESTIA, PAUL P  
; REGISTRATION NUMBER: 23,031  
; REFERENCE/DOCKET NUMBER: GH-70368  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 610-407-0700  
; TELEFAX: 610-407-0701  
; TELEEX: 846169  
; INFORMATION FOR SEQ ID NO: 1:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 2541 base pairs  
; TYPE: nucleic acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: cDNA  
US-09-009-191-1

Alignment of: us-10-726-967a-1 x US-09-009-191-1 ..

## Alignment segment 1/1: (-)

Quality:	32.00	EScore:	261
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

**Alignment:**

```

27 ArgLeuProLeuArgSerGlyLeuGlYglYA1a      37
   ::||| ||| |::|::|
179 AAGCTGCCCTCCGGCCGGCTCCTCGSGCTCT      147

```

Sequence name: rni2ndb:US-09-604-608-1

Sequence documentation:

```

: Sequence 1 Application US/09604608
: Patent No. 6545127
:
: GENERAL INFORMATION:
: APPLICANT: Tang, Jordan J.N.
: APPLICANT: Lin, Xini
: APPLICANT: Koelsch, Gerald
: TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
: TITLE OF INVENTION: Of Use Thereof
: FILE REFERENCE: OMRF 179
: CURRENT APPLICATION NUMBER: US/09/604,608
: PRIOR FILING DATE: 2000-06-27
: PRIOR APPLICATION NUMBER: 60/141,363
: PRIOR FILING DATE: 1999-06-28
: PRIOR APPLICATION NUMBER: 60/168,060
: PRIOR FILING DATE: 1999-11-30
: PRIOR APPLICATION NUMBER: 60/177,836
: PRIOR FILING DATE: 2000-01-25
: PRIOR APPLICATION NUMBER: 60/178,368
: PRIOR FILING DATE: 2000-01-27
: PRIOR APPLICATION NUMBER: 60/210,292
: PRIOR FILING DATE: 2000-06-08
: NUMBER OF SEQ ID NOS: 31
: SOFTWARE: PatentIn Ver. 2.1
:
: SEQ ID NO 1
: LENGTH: 3252
: TYPE: DNA
: ORGANISM: Homo sapiens
: US-09-604-608-1

```

Alignment of: us-10-726-967a-1 x US-09-604-608-1 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

**Alignment:**

27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
:::|||||:::|:::  
140 AAGCTGCCCCCTCCGGCCGGGCTCTCGGACTCT 108

Sequence name: rnip2ndb:US-09-548-372D-27

Sequence documentation:

Sequence 27, Application US/09548372D  
Patent No. 6420534  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
TITLES OF INVENTION: THEREOF  
FILE REFERENCE: 29915/62801  
CURRENT APPLICATION NUMBER: US/09/548,372D  
CURRENT FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493

```

1 PRIOR FILING DATE: 1999-09-23
2 PRIOR APPLICATION NUMBER: US 03/404,133
3 PRIOR FILING DATE: 1999-09-23
4 PRIOR APPLICATION NUMBER: PCT/US99/2088
5 PRIOR FILING DATE: 1999-09-23
6 PRIOR APPLICATION NUMBER: US 63/101,594
7 PRIOR FILING DATE: 1998-09-24
8 NUMBER OF SEQ ID NOS: 73
9 SOFTWARE: PatentIn version 3.1

```

Alignment of: US-10-726-967a-1 x US-09-548-372D-27

Alignment segment 1/1: (+)

Quality:	28.00	Escape:	266
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

**Alignment:**

```

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38
   |||||      |||||      |||||      |||||
1170 CGCTTGCCATGTGCACGATGATTCAGGACGGCAGCGTGGAAGCCC 1270

```

Sequence name: rnip2ndb:US-09-548-367D-27

**Sequence documentation:**

```

: Sequence 27, Application US/09548367D
: Patent No. 6440698
: GENERAL INFORMATION:
: APPLICANT: CURNERY ET AL.
: TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
: TITLE OF INVENTION: THEREOF
: FILE REFERENCE: 29915/6280H
: CURRENT APPLICATION NUMBER: US/09/548,367D
: CURRENT FILING DATE: 2000-04-12
: PRIOR APPLICATION NUMBER: US 60/155,493
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: US 09/404,133
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: PCT/US99/20881
: PRIOR FILING DATE: 1999-09-23
: PRIOR APPLICATION NUMBER: US 60/101,594
: PRIOR FILING DATE: 1998-09-24
: NUMBER OF SEQ ID NOS: 73
: SOFTWARE: PatentIn version 3.1
: SEQ ID NO 27
: LENGTH: 1278
: TYPE: DNA
: ORGANISM: Homo sapiens
: US-09-548-367D-27

```

Alignment of: us-10-726-967a-1 x US-09-548-367D-27 .

Alignment segment 1/1: (+)

Quality:	28.00	Escape:	266
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75
Gaps:	1		

**Alignment:**

27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38

1170 CGCTTGCCATGTGCAGATGATTTCAGACGCGCGGTGAAGGCC 1217

Sequence name: rni2ndb:US-09-551-853D-27

Sequence documentation:

Sequence 27, Application US/09551853D  
Patent No. 6500667  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280L  
CURRENT APPLICATION NUMBER: US/09/551,853D  
PRIOR FILING DATE: 2000-04-18  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 27  
LENGTH: 1278  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-551-853D-27

Alignment of: us-10-726-967a-1 x US-09-551-853D-27 ..

Alignment segment 1/1: (+)

	Quality:	28.00		Score:
Matching length:	83.33		Total length:	266
Matching Percent Similarity:	62.50		Matching Percent Identity:	16
Total Percent Similarity:	1		Total Percent Identity:	58.33
Gaps:				43.75

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
||||| :|||||  
1170 CGCTTGCCATGTGCAGATGATTTCAGACGCGCGGTGAAGGCC 1217

Sequence name: rni2ndb:US-09-416-901B-27

Sequence documentation:

Sequence 27, Application US/09416901B  
Patent No. 6699671  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
FILE REFERENCE: 29915/6280A  
CURRENT APPLICATION NUMBER: US/09/416,901B  
PRIOR FILING DATE: 1999-10-13  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 27  
LENGTH: 1278  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-416-901B-27

Alignment of: us-10-726-967a-1 x US-09-416-901B-27 ..

Alignment segment 1/1: (+)

	Quality:	28.00		Score:
Matching length:	83.33		Total length:	266
Matching Percent Similarity:	62.50		Matching Percent Identity:	16
Total Percent Similarity:	1		Total Percent Identity:	58.33
Gaps:				43.75

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
||||| :|||||  
1170 CGCTTGCCATGTGCAGATGATTTCAGACGCGCGGTGAAGGCC 1217

Sequence name: rni2ndb:US-09-548-376D-27

Sequence documentation:

Sequence 27, Application US/09548376D  
Patent No. 6706485  
GENERAL INFORMATION:  
APPLICANT: GURNEY ET AL.  
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
FILE REFERENCE: 29915/6280F  
CURRENT APPLICATION NUMBER: US/09/548,376D  
PRIOR FILING DATE: 2000-04-12  
PRIOR APPLICATION NUMBER: US 60/155,493  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 09/404,133  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: PCT/US99/20881  
PRIOR FILING DATE: 1999-09-23  
PRIOR APPLICATION NUMBER: US 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 73  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 27  
LENGTH: 1278  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-548-376D-27

Alignment of: us-10-726-967a-1 x US-09-548-376D-27 ..

Alignment segment 1/1: (+)

	Quality:	28.00		Score:
Matching length:	83.33		Total length:	266
Matching Percent Similarity:	62.50		Matching Percent Identity:	16
Total Percent Similarity:	1		Total Percent Identity:	58.33
Gaps:				43.75

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
||||| :|||||  
1170 CGCTTGCCATGTGCAGATGATTTCAGACGCGCGGTGAAGGCC 1217

Sequence name: rni2ndb:US-09-794-927A-27

Sequence documentation:

Sequence 27, Application US/09794927A  
Patent No. 6727074  
GENERAL INFORMATION:  
APPLICANT: Gurney et al.  
TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
FILE REFERENCE: 29915/6280FG  
CURRENT APPLICATION NUMBER: US/09/794,927A

```

1 CURRENT FILING DATE: 2001-02-27
2
3 PRIOR APPLICATION NUMBER: 09/416,901
4
5 PRIOR FILING DATE: 1999-10-13
6
7 PRIOR APPLICATION NUMBER: 60/155,493
8
9 PRIOR FILING DATE: 1999-09-23
10
11 PRIOR APPLICATION NUMBER: 09/404,133
12
13 PRIOR FILING DATE: 1999-09-23
14
15 PRIOR APPLICATION NUMBER: PCT/US99/50881
16
17 PRIOR FILING DATE: 1999-09-23
18
19 PRIOR APPLICATION NUMBER: 60/101,594
20
21 PRIOR FILING DATE: 1998-09-24
22
23 NUMBER OF SEQ ID NOS: 74
24
25 SOFTWARE: PatentIn Ver. 2.0
26
27
28 SEQ ID NO 27
29
30 LENGTH: 1278
31
32 TYPE: DNA
33
34 ORGANISM: Homo sapiens
35
36 US-09-794 -927A-27

```





Alignment of: us-10-726-967a-1 x US-09-794-925A-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	266
Matching length:	12	Total length:	16
Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Alignment:

27 ArgleuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
|||||.....  
1170 CGCTTGCCATGTGCACGATGACTTCAGACGCGCGGTGGAAGGCC 1217

Sequence name: rnp2ndb:US-09-806-194A-27

Sequence documentation:

Sequence 27, Application US/09806194A  
Patent No. 6835565  
GENERAL INFORMATION:  
APPLICANT: Gurney, Mark E.  
APPLICANT: Bienkowski, Michael J.  
APPLICANT: Heinrikson, Robert L.  
APPLICANT: Parodi, Luis A.  
APPLICANT: Yan, Riqiang  
APPLICANT: Pharmacia & Upjohn Company  
TITLE OF INVENTION: Alzheimer's Disease Secretase  
FILE REFERENCE: 6177.P CP  
CURRENT APPLICATION NUMBER: US/09/806,194A  
CURRENT FILING DATE: 2001-09-17  
PRIOR APPLICATION NUMBER: 60/101,594  
PRIOR FILING DATE: 1998-09-24  
NUMBER OF SEQ ID NOS: 49  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 27  
LENGTH: 1278  
TYPE: DNA  
ORGANISM: Homo sapiens  
US-09-806-194A-27

Alignment of: us-10-726-967a-1 x US-09-806-194A-27 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	266
Matching length:	12	Total length:	16
Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Alignment:

27 ArgleuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
|||||.....  
1170 CGCTTGCCATGTGCACGATGACTTCAGACGCGCGGTGGAAGGCC 1217

Sequence name: rnp2ndb:US-09-009-191-3

Sequence documentation:

Sequence 3, Application US/09009191  
Patent No. 6319689  
GENERAL INFORMATION:  
APPLICANT: POWELL, DAVID  
APPLICANT: CHAPMAN, CONRAD  
APPLICANT: MURPHY, KAY  
APPLICANT: SMITH, TRUDI  
TITLE OF INVENTION: ASP2  
NUMBER OF SEQUENCES: 6  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: RATNER & PRESTIA

STREET: P.O. BOX 980  
CITY: VALLEY FORGE  
STATE: PA  
COUNTRY: USA  
ZIP: 19482

COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FASTSEQ for Windows Version 2.0

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/009,191  
FILING DATE: 20-JAN-1998  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: UK 9701684.4  
FILING DATE: 28-JAN-1997  
ATTORNEY/AGENT INFORMATION:  
NAME: PRESTIA, PAUL F

REGISTRATION NUMBER: 23,031  
REFERENCE/DOCKET NUMBER: GH-70368  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 610-407-0700  
TELEFAX: 610-407-0701  
TELEX: 846169

INFORMATION FOR SEQ ID NO: 3:

SEQUENCE CHARACTERISTICS:  
LENGTH: 2370 base pairs  
TYPE: nucleic acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: cDNA  
US-09-009-191-3

Alignment of: us-10-726-967a-1 x US-09-009-191-3 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	273
Matching length:	12	Total length:	16
Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Alignment:

27 ArgleuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
|||||.....  
1083 CGCTTGCCATGTGCACGATGACTTCAGACGCGCGGTGGAAGGCC 1130

Sequence name: rnp2ndb:US-09-713-158-1

Sequence documentation:

Sequence 1, Application US/09713158  
Patent No. 6361975  
GENERAL INFORMATION:  
APPLICANT: ZHU, YUAN  
APPLICANT: LI, XIAOTONG  
APPLICANT: POWELL, DAVID J.  
APPLICANT: CHRISTIE, GARY  
TITLE OF INVENTION: MOUSE ASPARTIC SECRETASE-2 (MASP-2)  
FILE REFERENCE: GP-70660  
CURRENT APPLICATION NUMBER: US/09/713,158  
CURRENT FILING DATE: 2000-11-15  
PRIOR APPLICATION NUMBER: 60/165,800  
PRIOR FILING DATE: 1999-11-16  
NUMBER OF SEQ ID NOS: 2  
SOFTWARE: FastSeq for Windows Version 3.0  
SEQ ID NO 1  
LENGTH: 1506  
TYPE: DNA  
ORGANISM: MUS MUSCULUS  
US-09-713-158-1

Alignment of: us-10-726-967a-1 x US-09-713-158-1 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	271
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

```
31 ArgSerg1yleug1yglYAlaPro
|||::|||::|||::|||::|||
326 AGGAAAGGCTGTGGGCGACGCCCC
303
```

Sequence name: rnp2ndb:US-09-548-372D-7

Sequence documentation:

```
; Sequence 7, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
; US-09-548-372D-7
```

Alignment of: us-10-726-967a-1 x US-09-548-372D-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	274
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerg1yleug1yglYAlaPro
|||::|||::|||::|||::|||
1562 AGGAAACCAACCAAGTGTGCTCCAGGCGCTTCCA
1527
```

Sequence name: rnp2ndb:US-09-548-367D-7

Sequence documentation:

```
; Sequence 7, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
; CURRENT FILING DATE: 2000-04-12
```

; PRIOR APPLICATION NUMBER: US 60/155,493

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 7

; LENGTH: 2043

; TYPE: DNA

; ORGANISM: Mus musculus

; US-09-548-367D-7

Alignment of: us-10-726-967a-1 x US-09-548-367D-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	274
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerg1yleug1yglYAlaPro
|||::|||::|||::|||::|||
1562 AGGAAACCAACCAAGTGTGCTCCAGGCGCTTCCA
1527
```

Sequence name: rnp2ndb:US-09-551-853D-7

Sequence documentation:

```
; Sequence 7, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280L
; CURRENT APPLICATION NUMBER: US/09/551,853D
; CURRENT FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 7
; LENGTH: 2043
; TYPE: DNA
; ORGANISM: Mus musculus
; US-09-551-853D-7
```

Alignment of: us-10-726-967a-1 x US-09-551-853D-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	274
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerg1yleug1yglYAlaPro
|||::|||::|||::|||::|||
38
```

1562 AGGGAACCAACCCAGATGTCCTCAGGGGCGCTCCA

1527

Sequence name: rnp2ndb:US-09-416-901B-7

Sequence documentation:

; Sequence 7, Application US/09416901B  
; Patent No. 6699671  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
; FILE REFERENCE: 29915/6280A  
; CURRENT APPLICATION NUMBER: US/09/416,901B  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 72  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 7  
; LENGTH: 2043  
; TYPE: DNA  
; ORGANISM: Mus musculus  
US-09-416-901B-7

Alignment of: us-10-726-967a-1 x US-09-416-901B-7 ..

Alignment segment 1/1: (-)

	Quality:	27.00		Score:	274
Matching length:	12		Total length:	12	
Matching Percent Similarity:	66.67		Matching Percent Identity:	50.00	
Total Percent Similarity:	66.67		Total Percent Identity:	50.00	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro  
1562 AGGGAACCAACCCAGATGTCCTCAGGGGCGCTCCA

38

1527

Sequence name: rnp2ndb:US-09-548-376D-7

Sequence documentation:

; Sequence 7, Application US/09548376D  
; Patent No. 6706485  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR  
; TITLE OF INVENTION: AND USES  
; TITLE OF INVENTION: THEREOF  
; FILE REFERENCE: 29915/6280F  
; CURRENT APPLICATION NUMBER: US/09/548,376D  
; CURRENT FILING DATE: 2000-04-12  
; PRIOR APPLICATION NUMBER: US 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: US 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 73  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 7  
; LENGTH: 2043  
; TYPE: DNA

; ORGANISM: Mus musculus  
US-09-548-376D-7

Alignment of: us-10-726-967a-1 x US-09-548-376D-7 ..

Alignment segment 1/1: (-)

	Quality:	27.00		Score:	274
Matching length:	12		Total length:	12	
Matching Percent Similarity:	66.67		Matching Percent Identity:	50.00	
Total Percent Similarity:	66.67		Total Percent Identity:	50.00	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro  
1562 AGGGAACCAACCCAGATGTCCTCAGGGGCGCTCCA

38

1527

Sequence name: rnp2ndb:US-09-794-927A-7

Sequence documentation:

; Sequence 7, Application US/09794927A  
; Patent No. 6727074  
; GENERAL INFORMATION:  
; APPLICANT: Gurney et al.  
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses  
; FILE REFERENCE: 29915/6280FG  
; CURRENT APPLICATION NUMBER: US/09/794,927A  
; CURRENT FILING DATE: 2001-02-27  
; PRIOR APPLICATION NUMBER: 09/416,901  
; PRIOR FILING DATE: 1999-10-13  
; PRIOR APPLICATION NUMBER: 60/155,493  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 09/404,133  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: PCT/US99/20881  
; PRIOR FILING DATE: 1999-09-23  
; PRIOR APPLICATION NUMBER: 60/101,594  
; PRIOR FILING DATE: 1998-09-24  
; NUMBER OF SEQ ID NOS: 74  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 7  
; LENGTH: 2043  
; TYPE: DNA  
; ORGANISM: Mus musculus  
US-09-794-927A-7

Alignment of: us-10-726-967a-1 x US-09-794-927A-7 ..

Alignment segment 1/1: (-)

	Quality:	27.00		Score:	274
Matching length:	12		Total length:	12	
Matching Percent Similarity:	66.67		Matching Percent Identity:	50.00	
Total Percent Similarity:	66.67		Total Percent Identity:	50.00	
Gaps:	0				

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro  
1562 AGGGAACCAACCCAGATGTCCTCAGGGGCGCTCCA

38

1527

Sequence name: rnp2ndb:US-09-548-373D-7

Sequence documentation:

; Sequence 7, Application US/09548373D  
; Patent No. 6737510  
; GENERAL INFORMATION:  
; APPLICANT: GURNEY ET AL.  
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES

```
/ TITLE OF INVENTION: THEREOF
/ FILE REFERENCE: 29915/62808
/ CURRENT APPLICATION NUMBER: US/09/548,373D
/ PRIOR FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 7
/ LENGTH: 2043
/ TYPE: DNA
/ ORGANISM: Mus musculus
/ US-09-548-373D-7
```

Alignment of: us-10-726-967a-1 x US-09-548-373D-7 ..

Alignment segment 1/1: (-)

	Quality:	27.00	Score:	274
Matching length:	12		12	
Matching Percent Similarity:	66.67		50.00	
Total Percent Similarity:	66.67		50.00	
Gaps:	0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro
1562 AGGGAACCAACCCAGATGTGTCACAGGGCGCTCCA
```

38  
1527

Sequence name: rnp2ndb:US-09-795-847B-7

Sequence documentation:

```
/ Sequence 7, Application US/09795847B
/ Patent No. 6753163
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/62808
/ CURRENT APPLICATION NUMBER: US/09/795,847B
/ CURRENT FILING DATE: 2001-02-28
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 7
/ LENGTH: 2043
/ TYPE: DNA
/ ORGANISM: Mus musculus
/ US-09-795-847B-7
```

Alignment of: us-10-726-967a-1 x US-09-795-847B-7 ..

Alignment segment 1/1: (-)

	Quality:	27.00	Score:	274
Matching length:	12		12	
Matching Percent Similarity:	66.67		50.00	
Total Percent Similarity:	66.67		50.00	
Gaps:	0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro
1562 AGGGAACCAACCCAGATGTGTCACAGGGCGCTCCA
```

38  
1527

Sequence name: rnp2ndb:US-09-869-414-7

Sequence documentation:

```
/ Sequence 7, Application US/09869414
/ Patent No. 6790610
/ GENERAL INFORMATION:
/ APPLICANT: Beinowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M
/ CURRENT APPLICATION NUMBER: US/09/869,414
/ CURRENT FILING DATE: 2001-06-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20881
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 7
/ LENGTH: 2043
/ TYPE: DNA
/ ORGANISM: Mus musculus
/ US-09-869-414-7
```

Alignment of: us-10-726-967a-1 x US-09-869-414-7 ..

Alignment segment 1/1: (-)

	Quality:	27.00	Score:	274
Matching length:	12		12	
Matching Percent Similarity:	66.67		50.00	
Total Percent Similarity:	66.67		50.00	
Gaps:	0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro
1562 AGGGAACCAACCCAGATGTGTCACAGGGCGCTCCA
```

38  
1527

Sequence name: rnp2ndb:US-09-548-366F-7

Sequence documentation:

```
/ Sequence 7, Application US/09548366F
/ Patent No. 6797487
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280J
/ CURRENT APPLICATION NUMBER: US/09/548,366F
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
```

;; PRIOR APPLICATION NUMBER: US 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn version 3.1  
;; SEQ ID NO: 7  
;; LENGTH: 2043  
;; TYPE: DNA  
;; ORGANISM: Mus musculus  
US-09-548-366F-7

Alignment of: us-10-726-967a-1 x US-09-548-366F-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Escore:	274
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38  
1562 AGGGAACCAACCCAGATGTGTCCAGGGCGCTCCCA 1527

Sequence name: rnp2ndb:US-09-548-368D-7

Sequence documentation:

;; Sequence 7, Application US/09548368D  
;; Patent No. 6825023  
;; GENERAL INFORMATION:  
;; APPLICANT: GURNEY ET AL.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
;; FILE REFERENCE: 29915/6280C  
;; CURRENT APPLICATION NUMBER: US/09/548,368D  
;; CURRENT FILING DATE: 2000-04-12  
;; PRIOR APPLICATION NUMBER: US 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 09/404,133  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: US 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 73  
;; SOFTWARE: PatentIn version 3.1  
;; SEQ ID NO: 7  
;; LENGTH: 2043  
;; TYPE: DNA  
;; ORGANISM: Mus musculus  
US-09-548-368D-7

Alignment of: us-10-726-967a-1 x US-09-548-368D-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Escore:	274
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38  
1562 AGGGAACCAACCCAGATGTGTCCAGGGCGCTCCCA 1527

Sequence name: rnp2ndb:US-09-794-925A-7

Sequence documentation:

;; Sequence 7, Application US/09794925A  
;; Patent No. 6828117  
;; GENERAL INFORMATION:  
;; APPLICANT: GURNEY ET AL.  
;; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES  
;; FILE REFERENCE: 29915/6280H1  
;; CURRENT APPLICATION NUMBER: US/09/794,925A  
;; CURRENT FILING DATE: 2001-02-27  
;; PRIOR APPLICATION NUMBER: 09/416,901  
;; PRIOR FILING DATE: 1999-10-13  
;; PRIOR APPLICATION NUMBER: 60/155,493  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: PCT/US99/20881  
;; PRIOR FILING DATE: 1999-09-23  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 74  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO: 7  
;; LENGTH: 2043  
;; TYPE: DNA  
;; ORGANISM: Mus musculus  
US-09-794-925A-7

Alignment of: us-10-726-967a-1 x US-09-794-925A-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Escore:	274
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38  
1562 AGGGAACCAACCCAGATGTGTCCAGGGCGCTCCCA 1527

Sequence name: rnp2ndb:US-09-806-194A-7

Sequence documentation:

;; Sequence 7, Application US/09806194A  
;; Patent No. 6835565  
;; GENERAL INFORMATION:  
;; APPLICANT: GURNEY, Mark E.  
;; APPLICANT: Bienkowski, Michael J.  
;; APPLICANT: Helnikson, Robert L.  
;; APPLICANT: Parodi, Luis A.  
;; APPLICANT: Yan, Riqiang  
;; APPLICANT: Pharmacia & Upjohn Company  
;; TITLE OF INVENTION: Alzheimer's Disease Secretase  
;; FILE REFERENCE: 6177.P CP  
;; CURRENT APPLICATION NUMBER: US/09/806,194A  
;; CURRENT FILING DATE: 2001-09-17  
;; PRIOR APPLICATION NUMBER: 60/101,594  
;; PRIOR FILING DATE: 1998-09-24  
;; NUMBER OF SEQ ID NOS: 49  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO: 7  
;; LENGTH: 2043  
;; TYPE: DNA  
;; ORGANISM: Mus musculus  
US-09-806-194A-7

Alignment of: us-10-726-967a-1 x US-09-606-194A-7 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	274
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro      38
|||||  |||||  |||||  |||||  |||||  |||||
1562 AGGGAACCAACCCAGATGTGTCCAGGGGCGCTCTCA 1527
```

Sequence name: rnp2ndb:US-09-548-372D-27

Sequence documentation:

```
; Sequence 27, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-372D-27
```

Alignment of: us-10-726-967a-1 x US-09-548-372D-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	272
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

```
31 ArgSerGlyLeuGlyGlyAlaPro      38
|||||  |||||  |||||  |||||  |||||  |||||
242 AGGAAGGGGTGGGGGCGACACCC      219
```

Sequence name: rnp2ndb:US-09-548-367D-27

Sequence documentation:

```
; Sequence 27, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,367D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
```

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 09/404,133

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: PCT/US99/20881

; PRIOR FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 60/101,594

; PRIOR FILING DATE: 1998-09-24

; NUMBER OF SEQ ID NOS: 73

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 27

; LENGTH: 1278

; TYPE: DNA

; ORGANISM: Homo sapiens

US-09-548-367D-27

Alignment of: us-10-726-967a-1 x US-09-548-367D-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	272
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

```
31 ArgSerGlyLeuGlyGlyAlaPro      38
|||||  |||||  |||||  |||||  |||||  |||||
242 AGGAAGGGGTGGGGGCGACACCC      219
```

Sequence name: rnp2ndb:US-09-551-853D-27

Sequence documentation:

```
; Sequence 27, Application US/09551853D
; Patent No. 6500667
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/551,853D
; CURRENT FILING DATE: 2000-04-18
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-551-853D-27
```

Alignment of: us-10-726-967a-1 x US-09-551-853D-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	272
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

```
31 ArgSerGlyLeuGlyGlyAlaPro      38
|||||  |||||  |||||  |||||  |||||  |||||
```

242 AGAAGGGGTGGGGCAGCACCC

219

Sequence name: rnp2ndb:US-09-416-901B-27

```
Sequence documentation:
; Sequence 27, Application US/09416901B
; Patent No. 6699671
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: 29915/6280A
; CURRENT APPLICATION NUMBER: US/09/416,901B
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20861
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-416-901B-27
```

Alignment of: us-10-726-967a-1 x US-09-416-901B-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	272
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

```
31 ArgserglyleuglyglyAlaPro
|||::|||::|||::|||::|||
242 AGAAGGGGTGGGGCAGCACCC
|||::|||::|||::|||::|||
219
```

Sequence name: rnp2ndb:US-09-548-376D-27

```
Sequence documentation:
; Sequence 27, Application US/09548376D
; Patent No. 6706485
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR
; FILE REFERENCE: 29915/6280F
; CURRENT APPLICATION NUMBER: US/09/548,376D
; PRIOR FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20861
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
```

US-09-548-376D-27

Alignment of: us-10-726-967a-1 x US-09-548-376D-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	272
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

```
31 ArgserglyleuglyglyAlaPro
|||::|||::|||::|||::|||
242 AGAAGGGGTGGGGCAGCACCC
|||::|||::|||::|||::|||
219
```

Sequence name: rnp2ndb:US-09-794-927A-27

```
Sequence documentation:
; Sequence 27, Application US/09794927A
; Patent No. 6727074
; GENERAL INFORMATION:
; APPLICANT: Gurney et al.
; TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses
; FILE REFERENCE: 29915/6280FG
; CURRENT APPLICATION NUMBER: US/09/794,927A
; PRIOR FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,901
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20861
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-927A-27
```

Alignment of: us-10-726-967a-1 x US-09-794-927A-27 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	272
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

```
31 ArgserglyleuglyglyAlaPro
|||::|||::|||::|||::|||
242 AGAAGGGGTGGGGCAGCACCC
|||::|||::|||::|||::|||
219
```

Sequence name: rnp2ndb:US-09-548-373D-27

```
Sequence documentation:
; Sequence 27, Application US/09548373D
; Patent No. 6737510
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE REFERENCE: THEREOF
```

```
/ FILE REFERENCE: 29915/6280B
/ CURRENT APPLICATION NUMBER: US/09/548,373D
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20861
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 27
/ LENGTH: 1278
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-548-373D-27
```

Alignment of: us-10-726-967a-1 x US-09-548-373D-27 ..

Alignment segment 1/1: (-)

	Quality:	26.00		Score:	272
Matching length:	8		Total length:	8	
Matching Percent Similarity:	87.50		Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50		Total Percent Identity:	62.50	
Gaps:	0				

Alignment:

```
31 ArgSerGlyLeuGlyGlyAlaPro
|||::|||::|||::|||
242 AGGAAGGGGTGGGGGACACACCC
```

38  
219

Sequence name: rnp2ndb:US-09-795-847B-27

Sequence documentation:

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/ Sequence 27, Application US/09795847B
/ Patent No. 6753163
/ GENERAL INFORMATION:
/ APPLICANT: Gurney, Mark E.
/ APPLICANT: Bienkowski, Michael J.
/ APPLICANT: Heinrichson, Robert L.
/ APPLICANT: Parodi, Luis A.
/ APPLICANT: Yan, Riqiang
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280B
/ CURRENT APPLICATION NUMBER: US/09/795,847B
/ CURRENT FILING DATE: 2001-02-28
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20861
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 74
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 27
/ LENGTH: 1278
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-795-847B-27
```

Alignment of: us-10-726-967a-1 x US-09-795-847B-27 ..

Alignment segment 1/1: (-)

	Quality:	26.00		Score:	272
Matching length:	8		Total length:	8	
Matching Percent Similarity:	87.50		Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50		Total Percent Identity:	62.50	
Gaps:	0				

Alignment:

```
31 ArgSerGlyLeuGlyGlyAlaPro
|||::|||::|||::|||
242 AGGAAGGGGTGGGGGACACACCC
```

38  
219

Sequence name: rnp2ndb:US-09-865-414-27

Sequence documentation:

```
/ Sequence 27, Application US/09869414
/ Patent No. 6790610
/ GENERAL INFORMATION:
/ APPLICANT: Bienkowski et al.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
/ FILE REFERENCE: 28341/6280M
/ CURRENT APPLICATION NUMBER: US/09/869,414
/ CURRENT FILING DATE: 2001-06-27
/ PRIOR APPLICATION NUMBER: 09/416,901
/ PRIOR FILING DATE: 1999-10-13
/ PRIOR APPLICATION NUMBER: 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 09/404,133
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: PCT/US99/20861
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: 60/101,594
/ PRIOR FILING DATE: 1998-09-24
/ NUMBER OF SEQ ID NOS: 73
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 27
/ LENGTH: 1278
/ TYPE: DNA
/ ORGANISM: Homo sapiens
US-09-869-414-27
```

Alignment of: us-10-726-967a-1 x US-09-869-414-27 ..

Alignment segment 1/1: (-)

	Quality:	26.00		Score:	272
Matching length:	8		Total length:	8	
Matching Percent Similarity:	87.50		Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50		Total Percent Identity:	62.50	
Gaps:	0				

Alignment:

```
31 ArgSerGlyLeuGlyGlyAlaPro
|||::|||::|||::|||
242 AGGAAGGGGTGGGGGACACACCC
```

38  
219

Sequence name: rnp2ndb:US-09-548-366F-27

Sequence documentation:

```
/ Sequence 27, Application US/09548366F
/ Patent No. 6797487
/ GENERAL INFORMATION:
/ APPLICANT: GURNEY ET AL.
/ TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
/ FILE REFERENCE: 29915/6280J
/ CURRENT APPLICATION NUMBER: US/09/548,366F
/ CURRENT FILING DATE: 2000-04-12
/ PRIOR APPLICATION NUMBER: US 60/155,493
/ PRIOR FILING DATE: 1999-09-23
/ PRIOR APPLICATION NUMBER: US 09/404,133
```



```

; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-366F-27

Alignment of: us-10-726-967a-1 x US-09-548-366F-27
..

Alignment segment 1/1: (-)

Quality: 26.00      Bscore: 272
Matching length: 8      Total length: 8
Matching Percent Similarity: 87.50      Matching Percent Identity: 62.50
Total Percent Similarity: 87.50      Total Percent Identity: 62.50
Gaps: 0
```

## Alignment:

```

31 ArgSerGlyLeuGlyGlyAlaPro 38
||||:|||||:|||||
242 AGGAAGGGGTGGGGGCGACACCC 219
```

Sequence name: rnp2ndb:US-09-548-368D-27

## Sequence documentation:

```

; Sequence 27, Application US/09548368D
; Patent No. 6825023
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 28915/6280C
; CURRENT APPLICATION NUMBER: US/09/548,368D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-548-368D-27
```

Alignment of: us-10-726-967a-1 x US-09-548-368D-27

Alignment segment 1/1: (-)

```

Quality: 26.00      Bscore: 272
Matching length: 8      Total length: 8
Matching Percent Similarity: 87.50      Matching Percent Identity: 62.50
Total Percent Similarity: 87.50      Total Percent Identity: 62.50
Gaps: 0
```

## Alignment:

```

31 ArgSerGlyLeuGlyGlyAlaPro 38
||||:|||||:|||||
242 AGGAAGGGGTGGGGGCGACACCC 219
```

Sequence name: rnp2ndb:US-09-794-925A-27

```

Sequence documentation:
; Sequence 27, Application US/09794925A
; Patent No. 6828117
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; TITLE OF INVENTION: THEREFOR
; FILE REFERENCE: 28915/6280H
; CURRENT APPLICATION NUMBER: US/09/794,925A
; CURRENT FILING DATE: 2001-02-27
; PRIOR APPLICATION NUMBER: 09/416,501
; PRIOR FILING DATE: 1999-10-13
; PRIOR APPLICATION NUMBER: 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-794-925A-27
```

Alignment of: us-10-726-967a-1 x US-09-794-925A-27

Alignment segment 1/1: (-)

```

Quality: 26.00      Bscore: 272
Matching length: 8      Total length: 8
Matching Percent Similarity: 87.50      Matching Percent Identity: 62.50
Total Percent Similarity: 87.50      Total Percent Identity: 62.50
Gaps: 0
```

## Alignment:

```

31 ArgSerGlyLeuGlyGlyAlaPro 38
||||:|||||:|||||
242 AGGAAGGGGTGGGGGCGACACCC 219
```

Sequence name: rnp2ndb:US-09-806-194A-27

## Sequence documentation:

```

; Sequence 27, Application US/09806194A
; Patent No. 6835565
; GENERAL INFORMATION:
; APPLICANT: GURNEY, Mark E.
; APPLICANT: Bienkowski, Michael J.
; APPLICANT: Heinrichson, Robert L.
; APPLICANT: Parodi, Luis A.
; APPLICANT: Yan, Riqiang
; APPLICANT: Pharmacia & Upjohn Company
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE
; FILE REFERENCE: 6177.P CP
; CURRENT APPLICATION NUMBER: US/09/806,194A
; CURRENT FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 27
; LENGTH: 1278
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-806-194A-27
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Alignment of: us-10-726-967a-1 x US-09-806-194A-27

## Alignment segment 1/1: (-)

Quality:	26.00	Escore:	272
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

## Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
|||::|||::|||::|||  
242 AGGAGGGGTGGGGGACGACACC

38  
219

Sequence name: rnlp2ndb:US-09-009-191-3

## Sequence documentation:

; Sequence 3, Application US/09009191  
; Patent No. 6319689  
; GENERAL INFORMATION:  
; APPLICANT: POWELL, DAVID  
; APPLICANT: CHAPMAN, CONRAD  
; APPLICANT: MURPHY, KAY  
; APPLICANT: SMITH, TRUDI  
; TITLE OF INVENTION: ASP2  
; NUMBER OF SEQUENCES: 6  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: RATNER & PRESTIA  
; STREET: P.O. BOX 980  
; CITY: VALLEY FORGE  
; STATE: PA  
; COUNTRY: USA  
; ZIP: 19482  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FASTSEQ for Windows Version 2.0  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/009,191  
; FILING DATE: 20-JAN-1998  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: UK 9701684.4  
; FILING DATE: 28-JAN-1997  
; ATTORNEY/AGENT INFORMATION:  
; NAME: PRESTIA, PAUL F  
; REGISTRATION NUMBER: 23,031  
; REFERENCE/DOCKET NUMBER: GH-70368  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 610-407-0700  
; TELEFAX: 610-407-0701  
; TELEX: 846169  
; INFORMATION FOR SEQ ID NO: 3:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 2370 base pairs  
; TYPE: nucleic acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: cDNA  
US-09-009-191-3

Alignment of: us-10-726-967a-1 x US-09-009-191-3 ..

## Alignment segment 1/1: (-)

Quality:	26.00	Escore:	279
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

## Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
|||::|||::|||::|||  
155 AGGAGGGGTGGGGGACGACACC

38  
132



rnp2ndb:ADP44631	+	104.00	61.96	5625	Human beta-site APP cleaving enz	rnp2ndb:AD050429	-	32.00	40.89	264.13	1341	T7-Human-pro-Asp-2(a)delat
rnp2ndb:ADP44630	+	104.00	61.96	5700	Human beta-site APP cleaving enz	rnp2ndb:ADR75342	-	32.00	40.89	264.13	1341	T7-Human-pro-Asp-2(a)delat
rnp2ndb:ADP44629	+	104.00	61.96	5757	Human NS CDNA sequence SEQ ID NC	rnp2ndb:AAH15688	-	32.00	40.89	264.13	1362	Modified human aspartyl protease
rnp2ndb:ADP44628	+	104.00	61.96	5832	Human beta-site APP cleaving enz	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	DNA encoding human aspartyl prote
rnp2ndb:ADQ22186	+	104.00	61.96	5876	Human beta-site APP cleaving enz	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:ADQ17467	+	104.00	61.96	5878	Human beta-site APP cleaving enz	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:AAA28253	+	104.00	61.96	5878	Human beta-site APP cleaving enz	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:AAA28279	+	77.00	54.07	16080	Human beta-site APP cleaving enz	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:AAFB8345	+	77.00	54.07	89.49	Rat CDNA encoding beta-secretase	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:AAH15664	+	77.00	54.07	89.49	Mouse aspartyl protease 2 (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:AAH17674	+	77.00	54.07	89.54	Mouse aspartyl protease 2 (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:AAH1867	+	77.00	54.07	89.54	DNA encoding mouse aspartyl prote	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:AAH17021	+	77.00	54.07	89.54	Mouse aspartyl protease 2(a) (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:AAH15159	+	77.00	54.07	89.54	Mouse aspartyl protease 2a (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:AAH15459	+	77.00	54.07	89.54	Mouse aspartyl protease 2a (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:ADJ94319	+	77.00	54.07	89.54	Mouse aspartyl protease 2a (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:ADJ94315	+	77.00	54.07	89.54	Mouse aspartyl protease 2a (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:ADH35328	+	77.00	54.07	89.54	Mouse aspartyl protease 2a (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:ADH35307	+	77.00	54.07	89.54	Mouse aspartyl protease 2a (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:ADH32907	+	77.00	54.07	89.54	Mouse aspartyl protease 2a (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:ADH32907	+	77.00	54.07	89.54	Mouse aspartyl protease 2a (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:ADH32907	+	77.00	54.07	89.54	Mouse aspartyl protease 2a (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:ADH32907	+	77.00	54.07	89.54	Mouse aspartyl protease 2a (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:ADH32907	+	77.00	54.07	89.54	Mouse aspartyl protease 2a (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:ADH32907	+	77.00	54.07	89.54	Mouse aspartyl protease 2a (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:ADH32907	+	77.00	54.07	89.54	Mouse aspartyl protease 2a (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:ADH32907	+	77.00	54.07	89.54	Mouse aspartyl protease 2a (MSP)	rnp2ndb:ADH17878	-	32.00	40.89	264.13	1362	Human-Asp-2(a) protein lacking c
rnp2ndb:ADH32907	+	77.00	54.07	89.54	Mouse aspartyl protease 2a (MSP)	rnp2nd						



```

XX 23-OCT-2001 (first entry)
XX Human-Asp2(b) deltatm protein cDNA.
DE
XX
XX Human; aspartyl protease 2b; Asp 2b; beta-amyloid precursor protein; APP;
KM beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KM neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
KM neuroprotective; antisense therapy; Asp2(b) deltatm protein;
XX gene therapy; ss.
XX
OS Homo sapiens.
OS Synthetic.
XX
XX Key Location/Qualifiers
XX CDS 1..1287
XX /tag=a
XX /product="Human Asp2(b) deltatm protein"
XX
XX WO200150829-A2.
XX
XX 19-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-1B000799.
XX
XX 09-MAY-2001; 2001WO-1B000799.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-483072/52.
XX P-PSDB; AAE06891.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 10; Page 166-167; 185pp; English.
XX
XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX precursor protein (APP) isoforms and their corresponding DNA molecules.
XX Human aspartyl proteases can act as beta-secretase proteases useful for
XX treating Alzheimer's disease. APP isoforms are useful for identifying
XX modulators of amyloid-beta peptide production, for use in designing
XX therapeutics for the treatment and prevention of Alzheimer's disease,
XX dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX and neuronal loss. APP isoforms are also used in methods for identifying
XX inhibitors and modulators of human Asp2 activity. The invention relates
XX to a method for identifying agents that modulate the activity of human
XX aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX as a means to screen in cellular assays for the inhibitors of beta- and
XX gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX Asp nucleic acids in in vitro assays and in Northern and Southern blots.
XX The present cDNA sequence encodes Human aspartyl protease 2b (Hu-Asp2b)
XX deltatm protein which is obtained by the deletion of C-terminal
XX transmembrane and intracellular domains of Hu-Asp2b. Human Asp2b has beta
XX -secretase activity
XX
XX Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD13276 ..
XX
XX Alignment segment 1/1: (+)
XX
XX Quality: 104.00 Score: 35.9
XX Matching length: 20 Total length: 20

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Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0
Alignment:
22 ThrGlnHieGLYIleArLeuProLeuAgsGerglyleuGLYAlaApr 38
|||||
64 ACCGACGACGGCATTCCGGCTGCCCTGCGCAGCGAGCCTGGGGGGGCCCCC 113
|||||
38 oleuGLyleu 41
|||||
114 CCTGGGGCTG 123
|||||
Sequence name: rngp2ndb:AAD06768
Sequence documentation:
ID AAD06768 standard; cDNA; 1287 BP.
XX
XX AAD06768;
XX
XX 10-AUG-2001 (first entry)
XX
XX Human aspartyl protease 2 (b) delta TM cDNA.
XX
XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;
XX Alzheimer's disease; antiAlzheimer's; aspartyl protease 2; Asp 2;
XX beta-secretase; chromosome 11q23.3-24.1; mutant; ss.
XX
XX Homo sapiens.
XX Synthetic.
XX
XX Key Location/Qualifiers
XX CDS 1..1287
XX /tag=a
XX /product="Human aspartyl protease 2 (b) delta TM"
XX
XX WO200123533-A2.
XX
XX 05-APR-2001.
XX
XX 22-SEP-2000; 2000WO-US026080.
XX
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 98US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney M, Bienkowski MJ;
XX WPI; 2001-290516/30.
XX P-PSDB; AAE02598.
XX
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX protein, useful for the treatment of Alzheimer's disease.
XX
XX Example 10; Page 165-166; 189pp; English.
XX
XX The present invention relates to enzymes for cleaving the alpha-
XX secretase site of the amyloid precursor protein (APP) and methods of
XX identifying those enzymes. The methods may be used to identify enzymes
XX that may be used to cleave the alpha-secretase cleavage site of the APP
XX protein. The enzymes may be used to treat or modulate the progress of
XX Alzheimer's disease. The present sequence is human aspartyl protease 2
XX (Asp 2) (b) delta TM cDNA. The Asp 2 gene from which it is derived is
XX located on chromosome 11q23.3-24.1. The Asp 2 has beta-secretase protease
XX activity
XX
XX Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD06768 ..

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## Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

## Alignment:

22	ThrglnH1SGY11EArgLeuProLeuArgSerGlyLeuGlyAlaPr	38
64	ACCCAGCAGCGCATCCGCTGCCCTGCCAGCGGCTGGGGGCGCC	113
38	oleuGlyLeu	41
114	CCTGGGGCTG	123

Sequence name: rngp2ndb:AA511547

## Sequence documentation:

ID AA511547 standard; cDNA; 1287 BP.

AC AA511547;

XX 24-OCT-2001 (first entry)

DE Human cDNA encoding Human-pro-Asp 2(b) delta TM.

KM Human, Aspartyl protease; beta-secretase; neurotropic; ASP2;

KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

XX amyloid-beta; Abeta; Human-pro-Asp 2(b) delta TM; ss; mutant.

OS Homo sapiens.

XX Synthetic.

FH Key Location/Qualifiers

FT CDS 1..1287

FT /tag= a

FT /product= "Human-pro-Asp 2(b) delta TM"

XX WO200149098-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001WO-1B000798.

XX 09-MAY-2001; 2001WO-1B000798.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Blenkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-502549/55.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

XX protease 2, lacking Asp2 transmembrane domain and retaining beta

XX secretase activity of Asp2 useful for identifying inhibitors of Asp2

XX activity.

Disclousure; Page 166-167; 185pp; English.

The invention relates to a purified polypeptide comprising a fragment of

mammalian aspartyl protease (Asp2) protein which lacks the Asp2

transmembrane domain and the Asp2 protein, and where the polypeptide and

the fragment retain the beta-secretase activity of the mammalian Asp2

protein. The invention also details polynucleotides for the Asp proteins

and vectors expressing them, and a polypeptide (isoform of amyloid

CC protein precursor (APP) comprising the amino acid sequence of an APP or  
CC its fragment containing an APP cleavage site recognizable by a mammalian  
CC beta-secretase, and further comprising two lysine residues at the  
CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP  
CC fragment. Also included in the invention are methods of identifying  
CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
CC useful for treating Alzheimer's disease. APP is useful in methods for  
CC identifying inhibitors or modulators of human Asp2 activity and amyloid-  
CC beta (Abeta) peptide production. APP is also useful in designing  
CC therapeutics for the treatment or prevention of Alzheimer's disease. APP  
CC comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is  
CC associated with increased levels of Abeta processing is useful in assays  
CC relating the Alzheimer's research. The expression vector is useful for  
CC recombinantly expressing APP. Nucleic acids that hybridize to Asp  
CC oligonucleotides are useful as probes or primers. The probes are useful  
CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and  
CC Southern blots. The present sequence encodes Human-pro-Asp 2(b) delta TM  
CC protein, which lacks the C-terminal transmembrane domain

XX Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;

## Alignment of: us-10-726-967a-1 x AA511547

## Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

## Alignment:

22	ThrglnH1SGY11EArgLeuProLeuArgSerGlyLeuGlyAlaPr	38
64	ACCCAGCAGCGCATCCGCTGCCCTGCCAGCGGCTGGGGGCGCC	113
38	oleuGlyLeu	41
114	CCTGGGGCTG	123

Sequence name: rngp2ndb:ABL52487

## Sequence documentation:

ID ABL52487 standard; cDNA; 1287 BP.

XX ABL52487;

XX 16-JUL-2002 (first entry)

XX Human Asp-2(b)deltaTM nucleotide sequence SEQ ID NO:50.

XX Human, Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;

XX chromosome 11q23.3-24.1; gene; ss.

XX Homo sapiens.

XX Key Location/Qualifiers

XX CDS 1..1287

XX /tag= a

XX /product= "Human Asp-2(b)delta TM"

XX GB2367060-A.

XX 27-MAR-2002.

XX 29-OCT-2001; 2001GB-00025934.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155433P.

XX 23-SEP-1999; 99US-05020881.

XX 13-OCT-1999; 99US-00416901.

XX 06-DEC-1999; 99US-0169232P.



PR 22-SEP-2000; 2000GB-00023315.  
 XX (PHAA ) PHARMACIA & UPJOHN CO.  
 XX  
 XX  
 PI Bienkowski MJ, Gurney M,  
 DR WPI; 2002-397167/43.  
 DR P-PSDB; ABB78607.  
 XX  
 PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.  
 XX  
 PS Example 10; Page 137; 182pp; English.  
 XX  
 CC The present invention describes a human aspartyl protease 1 (hu-Asp1)  
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,  
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
 CC (I) under acidic conditions; and (b) determining the level of hu-Asp1  
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a  
 CC nucleotide sequence that hybridises under stringent conditions to the non-  
 CC coding strand complementary to a defined 1804 nucleotide sequence (see  
 CC AB52456) where the nucleotide sequence encodes a polypeptide having Asp1  
 CC proteolytic activity and lacks nucleotides encoding a transmembrane  
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that  
 CC hybridises under stringent conditions to (III) (the nucleotide sequence  
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding  
 CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)  
 CC comprising (III) or (III') and (5) a host cell (V) transformed or  
 CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease  
 CC substrate (I) may be used as an enzyme substrate in assays to detect  
 CC aspartyl protease activity, (II) and therefore diagnose diseases  
 CC associated with aberrant hu-Asp1 expression and activity such as  
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
 CC sequence encodes human Asp-2(b)deltaTM, which is given in an example from  
 CC the present invention  
 XX  
 SQ Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ABL52487 ..  
 Alignment segment 1/1: (+)  

Matching length:	104.00	Score:	35.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```

22 ThrGlnH1gLy11eArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
   |||||
64 ACCGACGACGGCATCGGCTGCCCTGGCGACGCGCTGGGGGGGCCCC 113
   |||||
38 olenuLyLeu
   |||||
114 CCTGGGGCGCTG
   |||||
      41
      123

```

Sequence name: rngp2ndb:ADJ94362

Sequence documentation:  
 ID ADJ94362 standard; cDNA; 1287 BP.  
 XX  
 AC ADJ94362;  
 XX  
 DT 03-JUN-2004 (first entry)  
 XX  
 DE Human-pro-Asp-2(b)deltaTM cDNA.  
 XX  
 KW Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;  
 KM nototropic; neuroprotective; amyloid beta; mutant.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 PN US6706485-B1.  
 XX  
 PD 16-MAR-2004.  
 XX  
 PF 12-APR-2000; 2000US-00548376.  
 XX  
 XX 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-015493P.  
 PR 23-SEP-1999; 99MO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 XX  
 PA (PHAA ) PHARMACIA & UPJOHN CO.  
 XX  
 PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
 XX WPI; 2004-236722/22.  
 DR P-PSDB; ADJ94363.  
 DR  
 XX  
 PT Identifying agents that modulate activity of Asp2 aspartyl protease  
 PT useful for treating or preventing Alzheimer's disease involves comparing  
 PT APP processing activity of protease in presence and absence of test  
 PT agent.  
 XX  
 PS Example 10; SEQ ID NO 50; 109pp; English.  
 XX  
 CC The invention relates to identifying agents that modulate activity of  
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 CC precursor protein (APP) in the presence and absence of a test agent,  
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated  
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy terminus amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw  
 CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the activity  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease. Preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease  
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a  
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2  
 CC proteins.  
 XX  
 SQ Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ADJ94362 ..  
 Alignment segment 1/1: (+)  

Matching length:	104.00	Score:	35.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00



## Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCCCTCGCGACGGGCTGGGGGGCCCC 113
38 OLeuGlyLeu 41
114 CCTGGGGCTG 123
```

Sequence name: rngp2ndb:AD050458

## Sequence documentation:

ID AD050458 standard; DNA; 1287 BP.

AC AD050458;

DT 29-JUL-2004 (first entry)

DE Human Asp2(b) deltaTM mutant DNA.

KW Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;

KM Alzheimer's disease; gene therapy; human; mutant; gene; ds.

OS Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

FH 1.1287

FT /\*tag= a

FT CDS /product= "Human Asp2(b) mutant protein"

XX US6737510-B1.

XX 18-MAY-2004.

PD 12-APR-2000; 2000US-00548373.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-015493P.

PR 23-SEP-1999; 99MO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA &amp; UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heintzkeon RL, Parodi LA, Yan R;

PI WPI; 2004-387112/36.

XX P-PSDB; AD050459.

XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG

PT involved in processing amyloid precursor protein into amyloid beta,

PT useful in preparing a composition for treating or preventing Alzheimer's

PT disease.

XX Example 10; SEQ ID NO 50; 108pp; English.

XX The invention relates to a method for identifying an agent that decreases  
XX the protease activity of the aspartyl protease (Asp) polypeptide. It also  
XX provides enzyme and enzymatic procedures for cleaving the beta secretase  
XX cleavage site of the amyloid precursor protein (APP). The invention is  
XX useful in preparing a composition for treating or preventing Alzheimer's  
XX disease. It is also useful in gene therapy. The present sequence is human  
XX Asp2(b) mutant DNA. This sequence is used to illustrate the method of the  
XX invention.

SQ Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050458 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	35.9
Matching	Percent	100.00	Matching	Percent	100.00
Total	Percent	100.00	Total	Percent	100.00
Gaps:		0			

## Alignment:

```
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCCCTCGCGACGGGCTGGGGGGCCCC 113
38 OLeuGlyLeu 41
114 CCTGGGGCTG 123
```

Sequence name: rngp2ndb:ADR75371

## Sequence documentation:

ID ADR75371 standard; DNA; 1287 BP.

AC ADR75371;

DT 18-NOV-2004 (first entry)

DE Human Asp2(b) deltaTM mutant DNA.

KW Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;

KM chromosome identification; Alzheimer's disease; human; mutant; gene; ds.

XX Homo sapiens.

XX Synthetic.

XX Key Location/Qualifiers

FH 1.1287

FT /\*tag= a

FT CDS /product= "Human Asp2(b) mutant protein"

XX US2004166507-A1.

XX 26-AUG-2004.

PD 28-AUG-2003; 2003US-00652045.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-015493P.

PR 13-OCT-1999; 99US-00416901.

XX (GURN) GURNEY M E.

XX (BIEN) BIENKOWSKI M J.

XX (HEIN) HEINRIKSON R L.

XX (PARO) PARODI L A.

XX (YANR) YAN R.

XX Gurney ME, Bienkowski MJ, Heintzkeon RL, Parodi LA, Yan R;

PI WPI; 2004-624916/60.

XX P-PSDB; ADR75372.

XX Novel purified/isolated polynucleotide encoding polypeptide having  
XX aspartyl protease activity involved in processing amyloid precursor  
XX protein into amyloid beta, useful in identifying agent decreasing  
XX activity of aspartyl protease.

XX Example 10; SEQ ID NO 50; 107pp; English.

XX The invention relates to nucleic acid sequences encoding aspartyl  
XX protease (Asp) polypeptides having aspartyl protease activity involved in  
XX processing amyloid precursor protein (APP) into amyloid beta. The  
XX invention also relates to a method for identifying an agent that  
XX decreases the protease activity of the Asp. Asp DNA is useful in

CC chromosome identification as they can hybridise with a specific location  
CC on a human chromosome and in identifying the relationship between genes  
CC and diseases (particular gene responsible for causing diseases). It is  
CC also useful for identifying candidates to modulate the progression of  
CC Alzheimer's disease. Asp is useful in raising antibodies that are useful  
CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The  
CC present sequence is the human Asp2(b)delatm mutant DNA. This sequence is  
CC used to illustrate the method of the invention.

SO Sequence 1287 BP, 271 A, 370 C, 384 G, 262 T, 0 U, 0 Other;

Alignment of: us-10-726-967a-1 x ADR75371 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching Length:	20	Total Length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThGlnHieGlylleaArgLeuProLeuArgSerGlyLeuGlyAlaLaf 38
64 ACCGACGACGCGCATCCGGCTGCCCTGCCGACGCGCGCGCGCGCC 113
38 OLeuGlyLeu 41
114 CCTGGGGGCTG 123
```

Sequence name: rnp2ndb:AAA15670

Sequence documentation:

ID AAA15670 standard; DNA; 1302 BP.

AC AAA15670;

XX 15-SEP-2003 (revised)

DT 06-AUG-2003 (revised)

DT 03-AUG-2000 (first entry)

XX Human-pro-Asp-2(a)-delatm nucleotide sequence.

XX Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2; ss;

KW Alzheimer's disease; beta secretase site; human-pro-Asp-2(a)-delatm.

XX Homo sapiens.

OS Enterobacteria phage T7.

XX Chimeric.

XX W0200017369-A2.

XX 30-MAR-2000.

XX 23-SEP-1999; 99WO-US020881.

XX 24-SEP-1998; 98US-0101594P.

XX (PHAA ) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heintzson RL, Parodi LA, Van R;

XX WPI; 2000-303209/26.

XX P-PSDB; AAY88433.

XX New enzyme designated human aspartase useful in research into Alzheimer's

XX disease is capable of cleaving amyloid protein precursor at the beta

XX secretase site to produce amyloid beta peptide.

XX Example 9; Fig 8; 183pp; English.

XX This sequence represents a modified version of the human aspartase 2

CC (Asp2) nucleotide sequence. The sequence is used in the bacterial  
CC expression of human Asp2L. The invention relates to a protease (e.g.  
CC Asp2) capable of cleaving the beta secretase site of amyloid precursor  
CC protein (APP). The protease contains a sequence encoding the amino acid  
CC sequence DTG and a sequence encoding DSG or DTG separated by 100-300  
CC amino acids. When mutated the APP gene causes an autosomal dominant form  
CC of Alzheimer's disease. APP localises to the cell surface membrane and  
CC have a single C-terminal transmembrane domain. Proteolytic processing of  
CC APP produces the amyloid beta protein, which is possibly very important  
CC in Alzheimer's disease. The invention includes a nucleotide sequence  
CC encoding the protease, a vector containing the nucleotide sequence, and a  
CC cell line comprising the vector. Methods for screening for inhibitors of  
CC beta secretase activity are also given in the invention. The human  
CC aspartase protein and nucleotide sequences and the methods for  
CC identifying inhibitors of the protease, are useful in the treatment of  
CC and research in to Alzheimer's disease. (Updated on 06-AUG-2003 to  
CC correct OS field.) (updated on 15-SEP-2003 to standardise OS field)

SO Sequence 1302 BP, 281 A, 367 C, 370 G, 284 T, 0 U, 0 Other;

Alignment of: us-10-726-967a-1 x AAA15670 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching Length:	20	Total Length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThGlnHieGlylleaArgLeuProLeuArgSerGlyLeuGlyAlaLaf 38
4 ACTGACGATGTAATCGTCGACGCGTACGCGTCTGGTCTCC 53
38 OLeuGlyLeu 41
54 ACTGGGCTCTG 63
```

Sequence name: rnp2ndb:AAA11713

Sequence documentation:

ID AAA11713 standard; DNA; 1302 BP.

AC AAA11713;

XX 11-SEP-2003 (revised)

DT 24-OCT-2001 (first entry)

XX DNA encoding T7-human aspartyl protease 2a delatm (low GC).

XX Human; aspartyl protease 1; Asp-1; nootropic; neuroprotective;

KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;

XX beta-secretase; Alzheimer's disease; ds.

XX Homo sapiens.

OS Enterobacteria phage T7.

XX Key

FT 1.1302

FT /product= a

XX W0200149097-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000797.

XX 09-MAY-2001; 2001WO-IB000797.

XX (BIEN/) BIENKOWSKI M J.



22 ThrglnhlsGlyllAArgLeuProLeuArgSerGlyLeuGlyGlyAlaPr 38  
 |||  
 4 ACTCAGCATGGTATTCTGTCACCTGGTAGCGGTCTGGGTGCTCC 53  
 38 OLeuGlyLeu 41  
 |||  
 54 ACTGGGTCTG 63

Sequence name: rnp2ndb:AAD13032

Sequence documentation:

ID AAD13032 standard; cDNA, 1302 BP.  
 AC AAD13032;  
 XX  
 XX  
 DT 23-OCT-2001 (first entry)  
 XX  
 DE Human-pro-Asp2(a) deltaTM (low GC) protein cDNA.

Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;  
 beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;  
 neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;  
 neuroprotective; antisense therapy; pro-Asp2(a) deltaTM protein;  
 gene therapy; ss.

OS Homo sapiens.  
 XX Synthetic.  
 OS

Key Location/Qualifiers  
 CDS 1..1302  
 /\*tag= a  
 /product= "Human-pro-Asp2(a) deltaTM (low GC) protein"

MO200150829-A2.  
 19-JUL-2001.

09-MAY-2001; 2001WO-IB000799.

09-MAY-2001; 2001WO-IB000799.

(BIEN/) BIENKOWSKI M J.  
 (GURN/) GURNEY M E.  
 PA (HEIN/) HEINRIKSON R L.  
 PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.

PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

DR WPI; 2001-483072/52.

DR P-PSDB; AAE06870.

PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.

PS Example 9; Fig 8; 185pp; English.

XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid  
 CC precursor protein (APP) isoforms and their corresponding DNA molecules.  
 CC Human aspartyl proteases can act as beta-secretase proteases useful for  
 CC treating Alzheimer's disease. APP isoforms are useful for identifying  
 CC modulators of amyloid-beta peptide production, for use in designing  
 CC therapeutics for the treatment and prevention of Alzheimer's disease,  
 CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis  
 CC and neuronal loss. APP isoforms are also used in methods for identifying  
 CC inhibitors and modulators of human Asp2 activity. The invention relates  
 CC to a method for identifying agents that modulate the activity of human  
 CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
 CC as a means to screen in cellular assays for the inhibitors of beta- and  
 CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in

CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
 CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.  
 CC The present cDNA sequence encodes Human-pro-aspartyl protease 2a (Asp2a)  
 CC deltaTM (low GC) protein which is obtained by the deletion of C-terminal  
 CC transmembrane domain and change of degenerate codons bases in 15 amino  
 CC acid positions from G/C to A/T in the Hu-Asp2a. Human Asp2a has beta-  
 CC secretase activity

XX Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13032 ..

Alignment segment 1/1: (+)

Matching	Percent	Quality	Length	Score
100.00	100.00	104.00	20	35.9
Total	Percent	Similarity	Identity	Identity
100.00	100.00	100.00	100.00	100.00
Gaps: 0				

Alignment:

22 ThrglnhlsGlyllAArgLeuProLeuArgSerGlyLeuGlyGlyAlaPr 38  
 |||  
 4 ACTCAGCATGGTATTCTGTCACCTGGTAGCGGTCTGGGTGCTCC 53  
 38 OLeuGlyLeu 41  
 |||  
 54 ACTGGGTCTG 63

Sequence name: rnp2ndb:AAD06750

Sequence documentation:

ID AAD06750 standard; cDNA, 1302 BP.

AC AAD06750;

DT 10-AUG-2001 (first entry)

DE Human-pro-Asp-2(a) deltaTM protein cDNA.

XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;  
 KW Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a;  
 XX beta-secretase; Asp-2a delta TM; ss.

OS Homo sapiens.  
 OS Synthetic.

Key Location/Qualifiers  
 CDS 1..1302  
 /\*tag= a  
 /product= "Human-pro-Asp-2(a) delta TM protein"

MO200123533-A2.

05-APR-2001.

22-SEP-2000; 2000WO-US026080.

PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99WO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 PR 06-DEC-1999; 99US-0169232P.

PA (PHAA ) PHARMACIA & UPJOHN CO.

PI Gurney M, Bienkowski MJ;

DR WPI; 2001-290516/30.

DR P-PSDB; AAE02592.

PT Enzymes that cleave the alpha-secretase site of the amyloid precursor  
 PT protein, useful for the treatment of Alzheimer's disease.

XX Example 9; Page 155; 189pp; English.

PS The present invention relates to enzymes for cleaving the alpha-

XX secretase site of the amyloid precursor protein (APP) and methods of

CC identifying those enzymes. The methods may be used to identify enzymes

CC that may be used to cleave the alpha-secretase cleavage site of the APP

CC protein. The enzymes may be used to treat or modulate the progress of

CC Alzheimer's disease. The present sequence is a cDNA encoding human

CC Aspartyl protease 2a (Asp-2a) deltaTM protein which is obtained by

CC deleting the transmembrane domain and adding a T7 tag at the N-terminal

CC end. This sequence has beta-secretase protease activity. Note: The

CC present sequence is also shown in figure 8 of the specification, but

CC lacks nucleotides at its 3' end. This sequence shown in figure 8 has a

CC stop codon at its 3' end

XX Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

SO Alignment of: us-10-726-967a-1 x AAD06750 ..

Alignment segment 1/1: (+)

Quality: 104.00	Score: 35.9
Matching length: 20	Total length: 20
Matching Percent Similarity: 100.00	Matching Percent Identity: 100.00
Total Percent Similarity: 100.00	Total Percent Identity: 100.00

Gaps: 0

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValA1Pr 38
   |||||
4  ACTGACGATGATTGTCCTGCGACCTGCGGTGGGTGGTCTCC 53
38 OleuGlyLeu
   |||||
54 ACTGGGTCTCG
   |||||
63

```

Sequence name: rmgp2ndb:AA511528

Sequence documentation:

ID AA511528 standard; cDNA; 1302 BP.

XX AA511528;

AC 24-OCT-2001 (first entry)

XX

DT Human cDNA encoding Human-pro-Asp 2(a) delta TM (low GC).

XX

DE Human; Aspartyl protease; beta-secretase; neurotrophic; ASP2;

XX

KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

KW amyloid-beta; Abeta; ss; Human-pro-Asp 2(a) delta TM (low GC).

XX

OS Homo sapiens.

OS Synthetic.

XX

FT Key Location/Qualifiers

FT CDS 1..1302

FT /tag= a

FT /product= "Human-pro-Asp 2(a) delta TM (low GC)"

XX

PN MO200149098-A2.

XX

XX 12-JUL-2001.

XX

XX 09-MAY-2001; 2001WO-IB000798.

XX

XX 09-MAY-2001; 2001WO-IB000798.

XX

XX (BIEN/) BIENKOWSKI M J.

PA (GURNEY/) GURNEY M E.

PA (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.

PA (YANR/) YAN R.

XX

XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX

XX WPI; 2001-502549/55.

DR P-PSDB; AAU06614.

XX

PT Novel purified polypeptide comprising fragment of mammalian aspartyl

PT protease 2, lacking Asp2 transmembrane domain and retaining beta

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

PT activity.

XX

PS Example 9; Fig 8; 185pp; English.

XX

XX The invention relates to a purified polypeptide comprising a fragment of

CC mammalian aspartyl protease (Asp)2 protein which lacks the Asp2

CC transmembrane domain and the Asp2 protein, and where the polypeptide and

CC the fragment retain the beta-secretase activity of the mammalian Asp2

CC protein. The invention also details polynucleotides for the Asp proteins

CC and vectors expressing them, and a polypeptide (isoform of amyloid

CC protein precursor (APP)) comprising the amino acid sequence of an APP or

CC its fragment containing an APP cleavage site recognizable by a mammalian

CC beta-secretase, and further comprising two lysine residues at the

CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP

CC fragment. Also included in the invention are methods of identifying

CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are

CC useful for treating Alzheimer's disease. APP is useful in methods for

CC identifying inhibitors or modulators of human Asp2 activity and amyloid-

CC beta (Abeta) peptide production. APP is also useful in designing

CC therapeutics for the treatment or prevention of Alzheimer's disease. APP

CC comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is

CC associated with increased levels of Abeta processing is useful in assays

CC relating the Alzheimer's research. The expression vector is useful for

CC recombinantly expressing APP. Nucleic acids that hybridize to Asp

CC oligonucleotides are useful as probes or primers. The probes are useful

CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and

CC Southern blots. The present sequence encodes Human-pro-Asp 2(a) delta TM

CC (low GC), a synthetic version of Asp 2(a) whose GC content has been

CC altered to facilitate expression in E.coli

XX

SO Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

XX

Alignment of: us-10-726-967a-1 x AA511528 ..

Alignment segment 1/1: (+)

Quality: 104.00	Score: 35.9
Matching length: 20	Total length: 20
Matching Percent Similarity: 100.00	Matching Percent Identity: 100.00
Total Percent Similarity: 100.00	Total Percent Identity: 100.00

Gaps: 0

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValA1Pr 38
   |||||
4  ACTGACGATGATTGTCCTGCGACCTGCGGTGGGTGGTCTCC 53
38 OleuGlyLeu
   |||||
54 ACTGGGTCTCG
   |||||
63

```

Sequence name: rmgp2ndb:AB152468

Sequence documentation:

ID AB152468 standard; cDNA; 1302 BP.

XX AB152468;

AC 16-JUL-2002 (first entry)

XX

DT Human-pro-Asp-2(a)deltaTM (low GC) nucleotide sequence SEQ ID NO.25.

XX

KM Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;  
 KM amyloid precursor protein; APP; gene; ss.  
 XX Homo sapiens.  
 OS  
 FH Key Location/Qualifiers  
 FT 1.1302  
 FT CDS /tag= a  
 FT /product= "human-pro-Asp-2(a)deltaTM (low GC)"  
 XX  
 PN GB2367060-A.  
 PD 27-MAR-2002.  
 PF 29-OCT-2001, 2001GB-00025934.  
 XX  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99WO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 PR 06-DEC-1999; 99US-0169232P.  
 PR 22-SEP-2000; 2000GB-00023315.  
 XX  
 PA (PHARMA) PHARMACIA & UPJOHN CO.  
 XX  
 PI Bienkowski MJ, Gurney M;  
 DR WPI; 2002-397167/43.  
 DR P-PSDB; ABB78601.  
 XX  
 PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.  
 XX  
 PS Example 9; Fig 8; 182pp; English.  
 XX  
 CC The present invention describes a human aspartyl protease 1 (hu-Asp1)  
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,  
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1  
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a  
 CC nucleotide sequence that hybridises under stringent conditions to the non  
 CC coding strand complementary to a defined 1804 nucleotide sequence (see  
 CC AB52456) where the nucleotide sequence encodes a polypeptide having Asp1  
 CC proteolytic activity and lacks nucleotides encoding a transmembrane  
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that  
 CC hybridises under stringent conditions to (III) (the nucleotide sequence  
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding  
 CC to amino acids 23-67 of hu-Asp1 (see ABB78589)); (4) a vector (IV)  
 CC comprising (III) or (III') and (5) a host cell (V) transformed or  
 CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease  
 CC substrate (I) may be used as an enzyme substrate in assays to detect  
 CC aspartyl protease activity, (II) and therefore diagnose diseases  
 CC associated with aberrant hu-Asp1 expression and activity such as  
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
 CC sequence encodes human-pro-Asp-2(a)deltaTM (low GC), which is given in an  
 CC example from the present invention  
 XX  
 SQ Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ABLS2468 ..  
 Alignment segment 1/1: (+)  
 Quality: 104.00      Score: 35.9  
 Matching length: 20      Total length: 20  
 Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
 Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
 Gaps: 0  
 Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGIYVAlApr 38  
 |||||  
 4 ACTGAGCAGTCGATTCGCTGCGACTGCGCTAGCGGCTGGGAGGCTCC 53  
 |||||  
 38 oLeuGlyLeu 41  
 |||||  
 54 ACTGGGCTCTG 63  
 |||||  
 Sequence name: rngp2ndb:ADJ94337  
 Sequence documentation:  
 ID ADJ94337 standard; cDNA; 1302 BP.  
 XX  
 AC ADJ94337;  
 XX  
 DT 03-JUN-2004 (first entry)  
 XX  
 DE Human-pro-Asp-2(a)deltaTM (low GC) cDNA.  
 XX  
 KM Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);  
 KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;  
 KM nototropic; neuroprotective; amyloid beta; mutant.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 PN US6706485-B1.  
 XX  
 PD 16-MAR-2004.  
 XX  
 PF 12-APR-2000; 2000US-00548376.  
 XX  
 PR 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99WO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 XX  
 PA (PHARMA) PHARMACIA & UPJOHN CO.  
 XX  
 PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;  
 DR WPI; 2004-236722/22.  
 DR P-PSDB; ADJ94338.  
 XX  
 PT Identifying agents that modulate activity of Asp2 aspartyl protease  
 PT useful for treating or preventing Alzheimer's disease involves comparing  
 PT APP processing activity of protease in presence and absence of test  
 PT agent.  
 XX  
 PS Example 9; SEQ ID NO 25; 109pp; English.  
 XX  
 CC The invention relates to identifying agents that modulate activity of  
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 CC precursor protein (APP) in the presence and absence of a test agent  
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated  
 CC antibody that specifically binds to Hu-Asp polypeptide, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy terminus amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw  
 CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The

CC method is useful for identifying agents that modulate the activity  
CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
CC protease. Preferably, the method is useful for identifying agents that  
CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
CC precursor protein processing, are useful for treating or preventing  
CC Alzheimer's disease. The present sequence encodes an aspartyl protease  
CC mutant construct (e.g. lacking a transmembrane domain and/or including a  
CC caspase cleavage site) used to investigate the cleavage activity of Asp2  
CC proteins.

XX Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94337 ..

Alignment segment 1/1: (+)

Matching length:	Quality:	Score:
20	104.00	35.9
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTGACATGGATTCGTCTGCCTGCGTACGGGTCTGGGTGCTCC 53
38 OLeuGlyLeu 41
54 ACTGGGCTCTG 63
```

Sequence name: rngp2ndb:AD050433

Sequence documentation:

ID AD050433 standard; DNA; 1302 BP.

XX AC AD050433;

XX DT 29-JUL-2004 (first entry)

XX DE Human-pro-Asp-2(a)delatm mutant DNA.

XX KM Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;

XX KM Alzheimer's disease; gene therapy; human; mutant; ds.

XX OS Homo sapiens.

XX OS Synthetic.

XX FH Key Location/Qualifiers

XX FT CDS 1..1302

XX FT /tag= a /product= "Human-pro-Asp-2(a)delatm mutant protein"

XX PN US6737510-B1.

XX PD 18-MAY-2004.

XX PF 12-APR-2000; 2000US-00548373.

XX PR 24-SEP-1998; 98US-0101594P.

XX PR 23-SEP-1999; 99US-00404133.

XX PR 23-SEP-1999; 99US-0155493P.

XX PR 23-SEP-1999; 99WO-US020881.

XX PR 13-OCT-1999; 99US-00416901.

XX PA (PHAA) PHARMACIA & UPJOHN CO.

XX PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

XX DR WPI; 2004-387112/36.

XX DR P-Psdb; AD050434.

PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG  
PT involved in processing amyloid precursor protein into amyloid beta;  
PT useful in preparing a composition for treating or preventing Alzheimer's  
PT disease.

XX Example 9; SEQ ID NO 25; 108bp; English.

XX CC The invention relates to a method for identifying an agent that decreases  
CC the protease activity of the aspartyl protease (Asp) polypeptide. It also  
CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
CC cleavage site of the amyloid precursor protein (APP). The invention is  
CC useful in preparing a composition for treating or preventing Alzheimer's  
CC disease. It is also useful in gene therapy. The present sequence is human  
CC -pro-Asp-2(a)delatm mutant DNA. This sequence is used to illustrate the  
CC method of the invention.

XX SQ Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050433 ..

Alignment segment 1/1: (+)

Matching length:	Quality:	Score:
20	104.00	35.9
Matching Percent Similarity:	100.00	Total length: 20
Total Percent Similarity:	100.00	Matching Percent Identity: 100.00
Gaps:	0	Total Percent Identity: 100.00

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
4 ACTGACATGGATTCGTCTGCCTGCGTACGGGTCTGGGTGCTCC 53
38 OLeuGlyLeu 41
54 ACTGGGCTCTG 63
```

Sequence name: rngp2ndb:ADR75346

Sequence documentation:

ID ADR75346 standard; DNA; 1302 BP.

XX AC ADR75346;

XX DT 18-NOV-2004 (first entry)

XX DE Human-pro-Asp-2(a)delatm mutant DNA.

XX KM Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;

XX KM chromosome identification; Alzheimer's disease; human; mutant; gene; ds.

XX OS Homo sapiens.

XX OS Synthetic.

XX FH Key Location/Qualifiers

XX FT CDS 1..1302

XX FT /tag= a /product= "Human-pro-Asp-2(a)delatm mutant protein"

XX PN US2004166507-A1.

XX PD 26-AUG-2004.

XX PF 29-AUG-2003; 2003US-00652045.

XX PR 24-SEP-1998; 98US-0101594P.

XX PR 23-SEP-1999; 99US-00404133.

XX PR 23-SEP-1999; 99US-0155493P.

XX PR 13-OCT-1999; 99US-00416901.

XX PA (GURN/) GURNEY M E.

XX PA (BIEN/) BIENKOWSKI M J.

PA (HEIN/) HEINRIKSON R. L.  
 PA (PARO/) PARODI L. A.  
 PA (YANR/) YAN R.  
 PI Gurney ME, Bienkowiak MJ, Heinrichson RL, Parodi LA, Yan R;  
 DR WPI; 2004-624916/50.  
 DR P-PSDB; ADR75347.  
 XX  
 PT Novel purified/isolated polynucleotide encoding polypeptide having  
 PT aspartyl protease activity involved in processing amyloid precursor  
 PT protein into amyloid beta, useful in identifying agent decreasing  
 PT activity of aspartyl protease.

Example 9; SEQ ID NO 25; 107pp; English.

CC The invention relates to nucleic acid sequences encoding aspartyl  
 CC protease (Asp) polypeptides having aspartyl protease activity involved in  
 CC processing amyloid precursor protein (APP) into amyloid beta. The  
 CC invention also relates to a method for identifying an agent that  
 CC decreases the protease activity of the Asp. Asp DNA is useful in  
 CC chromosome identification as they can hybridise with a specific location  
 CC on a human chromosome and in identifying the relationship between genes  
 CC and diseases (particular gene responsible for causing diseases). It is  
 CC also useful for identifying gene candidates to modulate the progression of  
 CC Alzheimer's disease. Asp is useful in raising antibodies that are useful  
 CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The  
 CC present sequence is the human-pro-Asp-2(a) deltaTM mutant DNA. This  
 CC sequence is used to illustrate the method of the invention.

XX SQ Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADR75346 ..

Alignment segment 1/1: (+)

Matching Length:	Quality:	Score:
20	104.00	35.9
Percent Similarity: 100.00	Total length: 20	
Total Percent Similarity: 100.00	Matching Percent Identity: 100.00	
Gaps: 0	Total Percent Identity: 100.00	

Alignment:

```

22  TTTGTHHISGLYITLeaTgLeuProLeuAArgSerGlyLeuGlyAlaPr 38
    |||||
4  ACTCAGCATGCTATTCGTCGCCACTGCGGTGCGGTGCGGTGCGTCC 53
    |||||
38  oLeuGlyLeu 41
    |||||
54  ACTGGGCTCTG 63

```

Sequence name: rnp2ndb:AA511733

Sequence documentation:

ID AA511733 standard; DNA; 1305 BP.

XX AA511733;

XX 09-SEP-2004 (revised)

XX 24-OCT-2001 (first entry)

XX DNA encoding human aspartyl protease 2b deltaTM (His)6.

KW Human; aspartyl protease 1; Asp-1; noctropic; neuroprotective;

KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;

KW beta-secretase; Alzheimer's disease; ds.

XX Homo sapiens.

OS Unidentified.

XX Key Location/Qualifiers

FT CDS 1..1305

FT /tag= a  
 FT /product= "Human Aspartyl protease-2b delta TM (His)6"  
 FT /transl\_except= (pos:1285..1287, aa:His)  
 FT /transl\_except= (pos:1288..1290, aa:His)  
 FT /transl\_except= (pos:1291..1293, aa:His)  
 FT /transl\_except= (pos:1294..1296, aa:His)  
 FT /transl\_except= (pos:1297..1299, aa:His)  
 FT /transl\_except= (pos:1300..1302, aa:His)

MO200149097-A2.

12-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000797.

XX 09-MAY-2001; 2001WO-IB000797.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M R.

XX (HEIN/) HEINRIKSON R. L.

XX (PARO/) PARODI L. A.

XX (YANR/) YAN R.

XX Bienkowiak MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 DR WPI; 2001-502548/55.

DR P-PSDB; AA007220.

PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.

XX Claim 149; Page 168-169; 185pp; English.

CC The invention relates to a novel purified polypeptide comprising a  
 CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. Also included is an isoform of amyloid protein precursor (APP)  
 CC comprising the amino acid sequence of a APP or its fragment containing an  
 CC APP cleavage site recognizable by a mammalian beta-secretase, and further  
 CC comprising two lysine residues at the carboxyl terminus of the amino acid  
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used  
 CC for assaying for modulators of beta-secretase activity; identifying  
 CC agents that inhibit the APP processing activity of human Asp2 aspartyl  
 CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2  
 CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.  
 CC Agents identified by the above methods are useful for treating  
 CC Alzheimer's disease; and for identifying modulators of amyloid-beta  
 CC (Abeta) peptide production, for use in designing therapeutics for the  
 CC treatment or prevention of Alzheimer's disease. Probes and primers  
 CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp  
 CC nucleic acids in vitro assays and in Northern and Southern blots. The  
 CC present sequence represents the coding sequence of human Asp-2b delta  
 CC TM(His)6 construct which has a 6 histidine tag and lacks the  
 CC transmembrane domain. This construct was used for bacterial expression  
 CC and purification of human Asp2b

CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key

XX SQ Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AA511733 ..

Alignment segment 1/1: (+)

Matching Length:	Quality:	Score:
20	104.00	35.9
Percent Similarity: 100.00	Total length: 20	
Total Percent Similarity: 100.00	Matching Percent Identity: 100.00	
Gaps: 0	Total Percent Identity: 100.00	



## Alignment:

```

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||
64 ACCGAGCAGCGGATCGGCTGCCCTGGCGACGGGCTGGGGGGGGCCCC 113
|||
38 OleuGlyLeu 41
|||
114 CCTGGGGCTG 123

```

Sequence name: rngp2ndb:AAD17896

## Sequence documentation:

```

ID AAD17896 standard; cDNA; 1305 BP.
XX
AC AAD17896;
XX
DT 10-DEC-2001 (first entry)
XX
DE Human-Asp 2(b) lacking TM domain (His)6 protein encoding cDNA.
XX
KW Human; aspartyl protease 2b; Asp2b; amyloid precursor protein; APP;
KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
KW amyloid plaque; neuronal loss; proteolytic; neurotropic; neuroprotective;
KW ss.
XX
OS Homo sapiens.
XX
OS Synthetic.
XX
FH Key 1. .1305
FT /tag= a
FT /product= "Human-Asp 2(b) lacking transmembrane domain
FT (His)6 protein"
FT /transl_except= (pos:1285. .1287, aa:His)
FT /transl_except= (pos:1288. .1290, aa:His)
FT /transl_except= (pos:1291. .1293, aa:His)
FT /transl_except= (pos:1294. .1296, aa:His)
FT /transl_except= (pos:1297. .1299, aa:His)
FT /transl_except= (pos:1300. .1302, aa:His)
XX
PN GB2357767-A.
XX
PD 04-JUL-2001.
XX
PF 22-SEP-2000; 2000GB-00023315.
XX
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99MO-US020881.
PR 13-OCT-1999; 99US-00416901.
PR 06-DEC-1999; 99US-0169232P.
XX
PA (PHAA ) PHARMACIA & UPJOHN CO.
XX
PI Bienkowski MJ, Gurney M;
XX
DR WPI; 2001-444208/48.
XX
DR P-PSDB; AAE10647.
XX
PT Polypeptide comprising fragments of human aspartyl protease with amyloid
PT precursor protein processing activity and alpha-secretase activity, for
PT identifying modulators useful in treating Alzheimer's disease.
XX
PS Example 10; Page 138; 187pp; English.
XX
CC The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
CC proteins which lack transmembrane domain or amino terminal domain or
CC cytoplasmic domain and retains alpha-secretase activity and amyloid
CC protein precursor (APP) processing activity. The proteins of the
CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which
CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
CC activity, where modulators that increase hu-Asp1 alpha-secretase activity

```

CC are useful for treating Alzheimer's disease (AD) which causes progressive  
 CC dementia with consequent formation of amyloid plaques, neurofibrillary  
 CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful  
 CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein  
 CC with the substrate under acidic conditions and determining the level of  
 CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding  
 CC human Asp 2(b) lacking a transmembrane (TM) domain (His)6 protein which  
 CC is generated from human Asp 2(b) protein by the deletion of its C-  
 CC terminal TM domain and addition of hexa-histidine tag at its C-terminus  
 XX

Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD17896 ..

Alignment segment 1/1: (+)

Matching	Quality:	104.00	Score:	35.9
Length: 20				
Percent Similarity: 100.00				
Total Percent Similarity: 100.00				
Matching <td></td> <td></td> <td></td> <td></td>				
Length: 20				
Percent Identity: 100.00				
Total Percent Identity: 100.00				

## Alignment:

```

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38
|||
64 ACCGAGCAGCGGATCGGCTGCCCTGGCGACGGGCTGGGGGGGGCCCC 113
|||
38 OleuGlyLeu 41
|||
114 CCTGGGGCTG 123

```

Sequence name: rngp2ndb:AAD13277

## Sequence documentation:

```

ID AAD13277 standard; cDNA; 1305 BP.
XX
AC AAD13277;
XX
DT 23-OCT-2001 (first entry)
XX
DE Human-Asp2(b) deltaTM (His)6 protein cDNA.
XX
KW Human; aspartyl protease 2b; Asp 2b; beta-amyloid precursor protein; APP;
KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotropic;
KW neuroprotective; antisense therapy; Asp2(b) deltaTM (His)6 protein;
KW gene therapy; ss.
XX
OS Homo sapiens.
XX
OS Synthetic.
XX
FH Key 1. .1305
FT /tag= a
FT /product= "Human Asp2(b) deltaTM (His)6 protein"
XX
PN WO200150829-A2.
XX
PD 19-JUL-2001.
XX
PF 09-MAY-2001; 2001WO-IB000799.
XX
PR 09-MAY-2001; 2001WO-IB000799.
XX
PA (BIEN/) BIENKOWSKI M J.
PA (GURN/) GURNEY M E.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
XX
PI Bienkowsk MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

```

DR WPI: 2001-483072/52.  
DR P-PSDB; AAE06892.

PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
PT activity.

XX  
XX  
PS Example 10; Page 168-169; 185pp; English.

CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid  
CC precursor protein (APP) isoforms and their corresponding DNA molecules.  
CC Human aspartyl proteases can act as beta-secretase proteases useful for  
CC treating Alzheimer's disease. APP isoforms are useful for identifying  
CC modulators of amyloid-beta peptide production, for use in designing  
CC therapeutics for the treatment and prevention of Alzheimer's disease,  
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis  
CC and neuronal loss. APP isoforms are also used in methods for identifying  
CC inhibitors and modulators of human Asp2 activity. The invention relates  
CC to a method for identifying agents that modulate the activity of human  
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
CC as a means to screen in cellular assays for the inhibitors of beta- and  
CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in  
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.  
CC The present CDNA sequence encodes Human aspartyl protease 2b (Hu-Asp2b)  
CC deltaTM (His)6 protein which is obtained by the deletion of C-terminal  
CC transmembrane domain and addition of a hexa-Histidine tag at the C-  
CC terminal end of Hu-Asp2b. Human Asp2b has beta-secretase activity

XX  
XX Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13277 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGGATCCGGCTGCCCTCGCGCAGCGGCTGGGGGCGCC 113
38 OLeuGlyLeu
114 CTTGGGGCTG 41
114 CTTGGGGCTG 123

```

Sequence name: rngp2ndb:AAD06769

Sequence documentation:

ID AAD06769 standard; cDNA; 1305 BP.

AC AAD06769;

XX 10-AUG-2001 (first entry)

DE Human aspartyl protease 2 (b) delta TM (His)6 cDNA.

XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;

KW Alzheimer's disease; antialzheimer's; aspartyl protease 2; Asp 2;

XX beta-secretase; chromosome 11q23.3-24.1; mutant; ss.

OS Homo sapiens.

XX Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1305

FT /tag= a

```

FT /product= "Human aspartyl protease 2 (b) delta TM (His)6"
FT /transl_except= (pos:1285..1287, aa:His)
FT /transl_except= (pos:1288..1290, aa:His)
FT /transl_except= (pos:1291..1293, aa:His)
FT /transl_except= (pos:1294..1296, aa:His)
FT /transl_except= (pos:1297..1299, aa:His)
FT /transl_except= (pos:1300..1302, aa:His)

```

XX W0200123533-A2.

XX 05-APR-2001.

XX 22-SEP-2000; 2000NO-US026080.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99NO-US020881.

XX 13-OCT-1999; 99US-00416901.

XX 06-DEC-1999; 99US-0169232P.

XX (PHAA ) PHARMACIA & UPJOHN CO.

XX Gurney M, Bienkowski MJ,

XX WPI: 2001-290516/30.

XX P-PSDB; AAE02599.

XX Enzymes that cleave the alpha-secretase site of the amyloid precursor  
XX protein, useful for the treatment of Alzheimer's disease.

XX Example 10; Page 167-168; 189pp; English.

CC The present invention relates to enzymes for cleaving the alpha-  
CC secretase site of the amyloid precursor protein (APP) and methods of  
CC identifying those enzymes. The methods may be used to identify enzymes  
CC that may be used to cleave the alpha-secretase cleavage site of the APP  
CC protein. The enzymes may be used to treat or modulate the progress of  
CC Alzheimer's disease. The present sequence is human aspartyl protease 2  
CC (Asp 2) (b) delta TM (His)6 cDNA. The Asp 2 gene from which it is derived  
CC is located on chromosome 11q23.3-24.1. Asp 2 has beta-secretase protease  
CC activity

XX Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD06769 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGGATCCGGCTGCCCTCGCGCAGCGGCTGGGGGCGCC 113
38 OLeuGlyLeu
114 CTTGGGGCTG 41
114 CTTGGGGCTG 123

```

Sequence name: rngp2ndb:AA511548

Sequence documentation:

ID AA511548 standard; cDNA; 1305 BP.

AC AA511548;

XX 24-OCT-2001 (first entry)

DE Human cDNA encoding human-pro-Asp 2 (b) delta TM (His)6.

XX Human; Aspartyl protease; beta-secretase; nootropic; ASP2;  
 KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;  
 KW amyloid-beta; Abeta; Human-pro-Asp 2(b) delta TM (His)6; ss; mutant.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 OS  
 PH Key Location/Qualifiers  
 FT CDS 1..1305  
 FT /tag= a  
 FT /product= "Human-pro-Asp 2(b) delta TM (His)6"  
 FT /transl\_except= (pos:1285..1302,aa:His-His-His-His-  
 FT His)  
 PN WO200149098-A2.  
 PD 12-JUL-2001.  
 XX  
 XX 09-MAY-2001; 2001WO-IB000798.  
 XX  
 XX 09-MAY-2001; 2001WO-IB000798.  
 XX  
 PA (BIEN/) BIENKOWSKI M J.  
 PA (GURNEY/) GURNEY M E.  
 PA (HEINRICH/) HEINRIKSON R L.  
 PA (PARODI/) PARODI L A.  
 PA (YANR/) YAN R.  
 XX  
 XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 XX WPI; 2001-502549/55.  
 DR  
 XX  
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.  
 XX  
 XX Example 10, Page 168-169; 185pp; English.  
 PS  
 XX  
 CC The invention relates to a purified polypeptide comprising a fragment of  
 CC mammalian aspartyl protease (Asp)2 protein which lacks the Asp2  
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and  
 CC the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. The invention also details polynucleotides for the Asp proteins  
 CC and vectors expressing them, and a polypeptide (isoform of amyloid  
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or  
 CC its fragment containing an APP cleavage site recognizable by a mammalian  
 CC beta-secretase, and further comprising two lysine residues at the  
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP  
 CC fragment. Also included in the invention are methods of identifying  
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
 CC useful for treating Alzheimer's disease. APP is useful in methods for  
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-  
 CC beta (Abeta) peptide production. APP is also useful in designing  
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP  
 CC comprising the APP-Sw-beta-secretase peptide sequence (NLND), which is  
 CC associated with increasing levels of Abeta processing is useful in assays  
 CC relating the Alzheimer's research. The expression vector is useful for  
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp  
 CC oligonucleotides are useful as probes or primers. The probes are useful  
 CC for detecting hu-Asp nucleic acids in in vitro assays and in Northern and  
 CC Southern blots. The present sequence encodes Human-pro-Asp 2(b) delta TM  
 CC protein, which lacks the C-terminal transmembrane domain and has a His  
 CC tag to aid purification  
 XX  
 SQ Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11548 ..

Alignment segment 1/1: (+)

Quality: 104.00

Score: 35.9

Matching length: 20 Total length: 20  
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
 Gaps: 0

## Alignment:

22 ThrGlnHISGlyIleArgLeuProleuArgSerGlyLeuGlyAlaPr 38  
 64 ACCGACGACGGCATCCGGCTGCCGCGACGGCCCTGGGGGCGCC 113  
 38 OLeuGlyLeu 41  
 114 CCTGGGGCGCTG 123

Sequence name: rngp2ndb:ABL52488

Sequence documentation:

ID ABL52488 standard; cDNA; 1305 BP.

AC ABL52488;

DT 16-JUL-2002 (first entry)

DE Human Asp-2(b)deltaTM(His)6 nucleotide sequence SEQ ID NO:52.

XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;  
 KW Chromosome 11q23.3-24.1; gene; ss.  
 XX  
 OS Homo sapiens.

XX

PH Key Location/Qualifiers

FT CDS 1..1305

FT /tag= a

FT /product= "Human Asp-2(b)deltaTM(His)6"

FT /transl\_except= (pos:1285..1287,aa:His)

FT /transl\_except= (pos:1288..1290,aa:His)

FT /transl\_except= (pos:1291..1293,aa:His)

FT /transl\_except= (pos:1294..1296,aa:His)

FT /transl\_except= (pos:1297..1299,aa:His)

FT /transl\_except= (pos:1300..1302,aa:His)

XX

PN GB367060-A.

XX

PD 27-MAR-2002.

XX

PF 29-OCT-2001; 2001GB-00025934.

XX

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

PR 06-DEC-1999; 99US-0169232P.

PR 22-SEP-2000; 2000GB-00023315.

XX

PA (PHAA ) PHARMACIA &amp; UPJOHN CO.

XX

PI Bienkowski MJ, Gurney M;

XX

DR WPI; 2002-397167/43.

XX

PS P-FSDB; ABB78608.

XX

XX Human aspartyl protease 1 substrates useful in assays to detect aspartyl

XX

XX protease activity, e.g. for the diagnosis of Alzheimer's disease.

XX

XX Example 10, Page 139; 182pp; English.

XX

XX The present invention describes a human aspartyl protease 1 (hu-Asp1)

XX

XX substrate (I) which comprises a peptide of no more than 50 amino acids,

XX

XX and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-

XX

XX Gln-Pro. Also described are: (i) a method (ii) for assaying hu-Asp1

XX

XX proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with

XX

XX (I) under acidic conditions; and (b) determining the level of hu-Asp1

XX

CC proteolytic activity; (2) a purified polynucleotide (III) comprising a  
 CC nucleotide sequence that hybridises under stringent conditions to the non  
 CC coding strand complementary to a defined 1804 nucleotide sequence (see  
 CC ABUS2436) where the nucleotide sequence encodes a polypeptide having Asp1  
 CC proteolytic activity and lacks nucleotides encoding a transmembrane  
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that  
 CC encodes a polypeptide under stringent conditions to (III) (the nucleotide sequence  
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding  
 CC to amino acids 23-62 of hu-Asp1 (see AB878589)); (4) a vector (IV)  
 CC comprising (III) or (III') and (5) a host cell (V) transformed or  
 CC transfected with (III'), (III') and/or (IV). The hu-Asp1 protease  
 CC substrate (I) may be used as an enzyme substrate in assays to detect  
 CC aspartyl protease activity, (II) and therefore diagnose diseases  
 CC associated with aberrant hu-Asp1 expression and activity such as  
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
 CC sequence encodes human Asp-2(b)deltaTM(His)6, which is given in an  
 CC example from the present invention

XX Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABUS2436 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Basecore:	35.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

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22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACACGCGCATCCGCTGCCCTCCGACGCGCTG9G9GCGCCCC 113
38 oLeuGlyLeu
|||||
114 CCTGGGGGCTG 123

```

Sequence name: rngp2ndb.ADJ94364

Sequence documentation:

ID ADJ94364 standard; cDNA; 1305 BP.

XX AC ADJ94364;

DT 03-JUN-2004 (first entry)

DE Human-pro-Asp-2(b)deltaTM(His)6 cDNA.

XX Human; sg; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);  
 KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;  
 KM neurotrophic; neuroprotective; amyloid beta; mutant.

OS Homo sapiens.

OS Synthetic.

XX US6706485-B1.

PD 16-MAR-2004.

PF 12-APR-2000; 2000US-00548376.

PR 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;  
 XX WPI; 2004-236722/22.  
 DR P-PSDB; ADJ94365.

PT Identifying agents that modulate activity of Asp2 aspartyl protease  
 PT useful for treating or preventing Alzheimer's disease involves comparing  
 PT APP processing activity of protease in presence and absence of test  
 PT agent.

XX Example 10; SEQ ID NO 52; 109pp; English.

XX The invention relates to identifying agents that modulate activity of  
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 CC precursor protein (APP) in the presence and absence of a test agent,  
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated  
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy terminus amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw  
 CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the activity  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease. Preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease  
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a  
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2  
 CC proteins.

XX Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94364 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Basecore:	35.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

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22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACACGCGCATCCGCTGCCCTCCGACGCGCTG9G9GCGCCCC 113
38 oLeuGlyLeu
|||||
114 CCTGGGGGCTG 123

```

Sequence name: rngp2ndb.ADO50460

Sequence documentation:

ID ADO50460 standard; DNA; 1305 BP.

XX ADO50460;

XX 29-JUN-2004 (first entry)

DE Human Asp2(b)deltaTM(His)6 DNA.  
 XX Asparyl protease; Asp; beta secretase; amyloid precursor protein; APP;  
 KW Alzheimer's disease; gene therapy; human; gene; ds.  
 XX Homo sapiens.  
 OS Synthetic.  
 XX Key  
 PH CDS  
 FT Location/Qualifiers  
 FT 1.1305  
 FT /\*tag= a  
 FT /product= "Human Asp-2(b)deltaTM(His)6 protein"  
 FT /transl\_except= (pos:1385..1387, aa:His)  
 FT /transl\_except= (pos:1388..1390, aa:His)  
 FT /transl\_except= (pos:1391..1393, aa:His)  
 FT /transl\_except= (pos:1394..1396, aa:His)  
 FT /transl\_except= (pos:1397..1399, aa:His)  
 FT /transl\_except= (pos:1400..1402, aa:His)  
 XX US6737510-B1.  
 XX 18-MAY-2004.  
 PD 12-APR-2000; 2000US-00548373.  
 XX 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99MO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 XX (PHAA ) PHARMACIA & UPJOHN CO.  
 XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;  
 PI WPI; 2004-387112/36.  
 DR P-PSDB; ADO50461.  
 XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG  
 PT involved in processing amyloid precursor protein into amyloid beta,  
 PT useful in preparing a composition for treating or preventing Alzheimer's  
 PT disease.  
 XX Example 10; SEQ ID NO 52; 108bp; English.  
 PS The invention relates to a method for identifying an agent that decreases  
 XX the protease activity of the aspartyl protease (Asp) polypeptide. It also  
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
 CC cleavage site of the amyloid precursor protein (APP). The invention is  
 CC useful in preparing a composition for treating or preventing Alzheimer's  
 CC disease. It is also useful in gene therapy. The present sequence is human  
 CC Asp2(b)deltaTM(His)6 DNA. This sequence is used to illustrate the method  
 CC of the invention.  
 XX Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;  
 SO Alignment of: us-10-726-967a-1 x ADO50460 ..  
 Alignment segment 1/1: (+)  
 Matching length: 104.00  
 Matching Percent Similarity: 100.00  
 Total Percent Similarity: 100.00  
 Gaps: 0  
 Total Percent Identity: 100.00  
 Alignment:  
 22 ThrGlnHsGlyIleArgLeuProLeuAtgSerGlyLeuGlyAlaPr 38  
 64 ACCGAGCACGGGATCCGGCTGCCCTGCCGACAGCGGCTGGGGGCGCCCC 113  
 38 OleuGlyLeu 41

114 CCTGGGCGCTG 123  
 Sequence name: rngp2ndb:ADR75373  
 Sequence documentation:  
 ID ADR75373 standard; DNA; 1305 BP.  
 AC ADR75373;  
 DT 18-NOV-2004 (first entry)  
 XX Human Asp2(b)deltaTM(His)6 DNA.  
 DE Asparyl protease; Asp; amyloid precursor protein; APP; amyloid beta;  
 KW chromosome identification; Alzheimer's disease; human; gene; ds.  
 XX Homo sapiens.  
 OS Synthetic.  
 XX Key  
 PH CDS  
 FT Location/Qualifiers  
 FT 1.1305  
 FT /\*tag= a  
 FT /product= "Human Asp-2(b)deltaTM(His)6 protein"  
 FT /transl\_except= (pos:1285..1287, aa:His)  
 FT /transl\_except= (pos:1288..1290, aa:His)  
 FT /transl\_except= (pos:1291..1293, aa:His)  
 FT /transl\_except= (pos:1294..1296, aa:His)  
 FT /transl\_except= (pos:1297..1299, aa:His)  
 FT /transl\_except= (pos:1300..1302, aa:His)  
 XX US2004166507-A1.  
 XX 26-AUG-2004.  
 PD 29-AUG-2003; 2003US-00652045.  
 XX 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 13-OCT-1999; 99US-00416901.  
 XX (GURN/) GURNEY M B.  
 PA (BIEN/) BIENKOWSKI M J.  
 PA (HEIN/) HEINRIKSON R L.  
 PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.  
 XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;  
 PI WPI; 2004-624916/60.  
 DR P-PSDB; ADR75374.  
 XX Novel purified/isolated polynucleotide encoding polypeptide having  
 PT aspartyl protease activity involved in processing amyloid precursor  
 PT protein into amyloid beta, useful in identifying agent decreasing  
 PT activity of aspartyl protease.  
 XX Example 10; SEQ ID NO 52; 107bp; English.  
 PS The invention relates to nucleic acid sequences encoding aspartyl  
 XX protease (Asp) polypeptides having aspartyl protease activity involved in  
 CC processing amyloid precursor protein (APP) into amyloid beta. The  
 CC invention also relates to a method for identifying an agent that  
 CC decreases the protease activity of the Asp. Asp DNA is useful in  
 CC chromosome identification as they can hybridise with a specific location  
 CC on a human chromosome and in identifying the relationship between genes  
 CC and diseases (particular gene responsible for causing diseases). It is  
 CC also useful for identifying candidates to modulate the progression of  
 CC Alzheimer's disease. Asp is useful in raising antibodies that are useful  
 CC in diagnostic assay for detecting Hu-Ap polypeptide expression. The  
 CC present sequence is the human Asp2(b)deltaTM(His)6 DNA. This sequence is  
 CC used to illustrate the method of the invention.



PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.  
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 XX WPI; 2001-502548/55.  
 DR P-PSDB; AAU07211.  
 XX  
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.  
 XX  
 PS Example 9; Fig 6; 185pp; English.  
 XX  
 CC The invention relates to a novel purified polypeptide comprising a  
 CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. Also included is an isoform of amyloid protein precursor (APP)  
 CC comprising the amino acid sequence of a APP or its fragment containing an  
 CC APP cleavage site recognizable by a mammalian beta-secretase, and further  
 CC comprising two lysine residues at the carboxyl terminus of the amino acid  
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used  
 CC for assaying for modulators of beta-secretase activity; identifying  
 CC agents that inhibit the APP processing activity of human Asp2 aspartyl  
 CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2  
 CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.  
 CC Agents identified by the above methods are useful for treating  
 CC Alzheimer's disease; and for identifying modulators of amyloid-beta  
 CC (Abeta) peptide production, for use in designing therapeutics for the  
 CC treatment or prevention of Alzheimer's disease. Probes and primers  
 CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp  
 CC nucleic acids in vitro assays and in Northern and Southern blots. The  
 CC present sequence represents the coding sequence of T7-human Asp-2a delta  
 CC TM construct which has a T7 tag and lacks the transmembrane domain. This  
 CC construct was used for bacterial expression and purification of human  
 CC Asp2a. (Updated on 11-SEP-2003 to standardise OS field)  
 CC  
 XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;  
 SQ  
 Alignment of: us-10-726-967a-1 x AAS11711 ..  
 Alignment segment 1/1: (+)  
 Matching Quality: 104.00 EScore: 35.9  
 Matching Percent Similarity: 100.00 Total Length: 20  
 Total Percent Similarity: 100.00 Matching Percent Identity: 100.00  
 Total Percent Identity: 100.00  
 Gaps: 0  
 Alignment:  
 22 ThrGlnHsiGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38  
 43 ACCGAGCAGCGGATCCGCTGCTGCGCAGCGGCTGGGGGGGGCCCC 92  
 38 GLeuGlyLeu 41  
 93 CTGGGGGCTG 102  
 Sequence name: rmgp2ndb:AA017874  
 Sequence documentation:  
 ID AAD17874 standard; cDNA; 1341 BP.  
 XX  
 AC AAD17874;  
 XX  
 DT 10-DEC-2001 (first entry)  
 XX  
 XX T7-Human-pro-Asp 2(a) protein lacking TM domain encoding cDNA.  
 KW Human; aspartyl protease 1; Asp1, amyloid precursor protein; APP;

KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;  
 KW amyloid plaque; neuronal loss; proteolytic; nootropic; neuroprotective;  
 KW T7-Human-pro-Asp 2(a) protein; ss.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 FH Key Location/Qualifiers  
 FT CDS 1..1341  
 FT /\*tag= a  
 FT /product= "T7-Human-pro-Asp 2(a) protein lacking  
 FT transmembrane domain"  
 XX  
 XX GB2357767-A.  
 XX  
 XX 04-JUL-2001.  
 XX  
 XX 22-SEP-2000; 2000GB-00023315.  
 XX  
 XX 23-SEP-1999; 99US-00400413.  
 XX 23-SEP-1999; 99US-0155493P.  
 XX 23-SEP-1999; 99WO-US020881.  
 XX 13-OCT-1999; 99US-00416901.  
 XX 06-DEC-1999; 99US-0169232P.  
 XX  
 XX (PHARMA ) PHARMACIA & UPJOHN CO.  
 XX  
 XX Bienkowski MJ, Gurney M;  
 XX  
 XX WPI; 2001-444208/48.  
 XX P-PSDB; AAB10638.  
 XX  
 XX Polypeptide comprising fragments of human aspartyl protease with amyloid  
 XX precursor protein processing activity and alpha-secretase activity, for  
 XX identifying modulators useful in treating Alzheimer's disease.  
 XX  
 PS Example 9; Fig 6; 187pp; English.  
 XX  
 CC The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1  
 CC proteins which lack transmembrane domain or amino terminal domain or  
 CC cytoplasmic domain and retains alpha-secretase activity and amyloid  
 CC protein precursor (APP) processing activity. The proteins of the  
 CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which  
 CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase  
 CC activity, where modulators that increase hu-Asp1 alpha-secretase activity  
 CC are useful for treating Alzheimer's disease (AD) which causes progressive  
 CC dementia with consequent formation of amyloid plaques, neurofibrillary  
 CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful  
 CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein  
 CC with the substrate under acidic conditions and determining the level of  
 CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding T7-  
 CC human-pro-Asp 2(a) protein lacking a transmembrane (TM) domain. T7-human-  
 CC pro-Asp 2(a) protein is generated from human Asp 2(a) protein by the  
 CC addition of a T7 tag at its N-terminal end and the deletion of its C-  
 CC terminal TM domain  
 XX  
 XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;  
 SQ  
 Alignment of: us-10-726-967a-1 x AAD17874 ..  
 Alignment segment 1/1: (+)  
 Matching Quality: 104.00 EScore: 35.9  
 Matching Percent Similarity: 100.00 Total Length: 20  
 Total Percent Similarity: 100.00 Matching Percent Identity: 100.00  
 Total Percent Identity: 100.00  
 Gaps: 0  
 Alignment:  
 22 ThrGlnHsiGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38  
 43 ACCGAGCAGCGGATCCGCTGCTGCGCAGCGGCTGGGGGGGGCCCC 92

38 OLeuGlyLeu  
|||  
93 CCGGGGCTG

41  
102

Sequence name: rngp2ndb:AAD13030

Sequence documentation:

ID AAD13030 standard; cDNA; 1341 BP.

AC AAD13030;

DT 23-OCT-2001 (first entry)

DE T7-Human-pro-Asp2(a) deltatm protein cDNA.

KM Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;  
KM beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;  
KM neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotropic;  
KM neuroprotective; antisense therapy; gene therapy;  
KM pro-Asp2(a) deltatm protein; ss.

OS Homo sapiens.  
XX Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1341

FT /tag= a

FT /product= "T7-Human-pro-Asp2(a) deltatm protein"

XX WO200150829-A2.

XX 19-JUN-2001.

XX 09-MAY-2001; 2001WO-IB000799.

XX 09-MAY-2001; 2001WO-IB000799.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-483072/52.

XX P-PSDB; AAE06868.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl  
XX protease 2, lacking Asp2 transmembrane domain and retaining beta  
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2  
XX activity.

XX Example 9; Fig 6; 185pp; English.

XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid  
XX precursor protein (APP) isoforms and their corresponding DNA molecules.  
XX Human aspartyl proteases can act as beta-secretase proteases useful for  
XX treating Alzheimer's disease. APP isoforms are useful for identifying  
XX modulators of amyloid-beta peptide production, for use in designing  
XX therapeutics for the treatment and prevention of Alzheimer's disease,  
XX dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis  
XX and neuronal loss. APP isoforms are also used in methods for identifying  
XX inhibitors and modulators of human Asp2 activity. The invention relates  
XX to a method for identifying agents that modulate the activity of human  
XX aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
XX as a means to screen in cellular assays for the inhibitors of beta- and  
XX gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in  
XX polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
XX Asp nucleic acids in in vitro assays and in Northern and Southern blots.  
XX The present cDNA sequence encodes T7-Human-pro-aspartyl protease 2a  
XX (Asp2a) deltatm protein which is obtained by the addition of T7 tag at

CC the N-terminal end and deletion of transmembrane domain at the C-terminal  
CC end of Hu-Asp2a. Human Asp2a has beta-secretase activity  
XX  
XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13030 ..

Alignment segment 1/1: (+)

	Quality:	104.00		Score:	35.9
Matching	Percent	100.00	Matching	Percent	100.00
Total	Percent	100.00	Total	Percent	100.00
Gaps:		0			

Alignment:

22 ThrgInHISGlyIleArgLeuProLeuArgserGlyLeuGlyIAlaPr 38  
43 ACCCAGCAGGCGATCCGCGCTGCCCTGCGCAGCGGCGGCGGCC 92  
38 OLeuGlyLeu  
|||  
93 CCGGGGCTG

41  
102

Sequence name: rngp2ndb:AAD06748

Sequence documentation:

ID AAD06748 standard; cDNA; 1341 BP.

XX AAD06748;

XX 10-AUG-2001 (first entry)

XX T7-Human-pro-Asp-2(a) delta TM protein cDNA.

XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;

XX Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a;

XX beta-secretase; Asp-2a delta TM; ss.

XX Homo sapiens.

XX Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1341

FT /tag= a

FT /product= "T7-Human-pro-Asp-2(a) delta TM protein"

XX WO200123533-A2.

XX 22-SEP-2000; 2000WO-US026080.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WO-US020881.

XX 13-OCT-1999; 99US-00416901.

XX 06-DEC-1999; 99US-0169232P.

XX (PHNA ) PHARMACIA & UPJOHN CO.

XX Gurney M, Bienkowski MJ;

XX WPI; 2001-290516/30.

XX P-PSDB; AAE02590.

XX Enzymes that cleave the alpha-secretase site of the amyloid precursor  
XX protein, useful for the treatment of Alzheimer's disease.

XX Example 9; Fig 6; 189pp; English.  
XX The present invention relates to enzymes for cleaving the alpha-  
XX secretase site of the amyloid precursor protein (APP) and methods of



CC identifying those enzymes. The methods may be used to identify enzymes  
 CC that may be used to cleave the alpha-secretase cleavage site of the APP  
 CC protein. The enzymes may be used to treat or modulate the progress of  
 CC Alzheimer's disease. The present sequence is a cDNA encoding human T7  
 CC aspartyl protease 2a (Asp 2a) deltaTM protein which is obtained by  
 CC deleting the transmembrane domain and adding a T7 tag at the N-terminal  
 CC end. This protein has beta-secretase protease activity

XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD06748 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
43 ACCCAGCAGCGGCATCCGCTGCTGCGCAGCGGCTCGGGGGGCCCC 92
|||||
38 OLeuGlyLeu 41
|||||
93 CCGGGGGGCTG 102

```

Sequence name: rngp2ndb:AA511526

Sequence documentation:

ID AA511526 standard; cDNA; 1341 BP.

AC AA511526;

XX 24-OCT-2001 (first entry)

DE Human cDNA encoding the T7-Human-pro-Asp 2(a) delta TM fusion protein.

XX Human; Aspartyl protease; beta-secretase; neurotropic; Asp2;

KM neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

KM amyloid-beta; Abeta; T7-Human-pro-Asp 2(a) delta TM; ss.

XX Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1341

FT /tag= a

FT /product= "T7-Human-pro-Asp 2(a) delta TM fusion protein"

XX WO200149098-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000798.

XX 09-MAY-2001; 2001WO-IB000798.

XX (BIEN/) BIENKOWSKI M J.

XX (GURNEY/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX BIENKOWSKI MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI, 2001-502549/55.

XX P-PSDB; AAU06612.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.

XX Example 9; Fig 6; 185pp; English.

XX The invention relates to a purified polypeptide comprising a fragment of  
 CC mammalian aspartyl protease (Asp) 2 protein which lacks the Asp2  
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and  
 CC the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. The invention also details polynucleotides for the Asp proteins  
 CC and vectors expressing them, and a polypeptide (isoform of amyloid  
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or  
 CC its fragment containing an APP cleavage site recognizable by a mammalian  
 CC beta-secretase, and further comprising two lysine residues at the  
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP  
 CC fragment. Also included in the invention are methods of identifying  
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
 CC useful for treating Alzheimer's disease. APP is useful in methods for  
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-  
 CC beta (Abeta) peptide production. APP is also useful in designing  
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP  
 CC comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is  
 CC associated with increased levels of Abeta processing is useful in assays  
 CC relating the Alzheimer's disease. The expression vector is useful for  
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp  
 CC oligonucleotides are useful as probes or primers. The probes are useful  
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and  
 CC Southern blots. The present sequence encodes T7-Human-pro-Asp 2(a) delta  
 CC TM fusion protein which has a N-terminal T7 tag to aid purification when  
 CC expressed in E. coli

XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AA511526 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
43 ACCCAGCAGCGGCATCCGCTGCTGCGCAGCGGCTCGGGGGGCCCC 92
|||||
38 OLeuGlyLeu 41
|||||
93 CCGGGGGGCTG 102

```

Sequence name: rngp2ndb:ABU52466

Sequence documentation:

ID ABU52466 standard; cDNA; 1341 BP.

XX ABL52466;

XX 16-JUL-2002 (first entry)

DE T7-human-pro-Asp-2(a) deltaTM nucleotide sequence SEQ ID NO:21.

XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;

KM amyloid precursor protein; APP; gene; ss.

XX Homo sapiens.

OS Key Location/Qualifiers

FT CDS 1..2094

FT /tag= a

/product= "T7-human-pro-Asp-2(a)deltaTM"

GB2367060-A.

27-MAR-2002.

29-OCT-2001; 2001GB-00025934.

23-SEP-1999; 99US-00404133.

23-SEP-1999; 99US-0155493P.

23-SEP-1999; 99WO-US020881.

13-OCT-1999; 99US-00416901.

06-DEC-1999; 99US-0169232P.

22-SEP-2000; 2000GB-00023315.

(PMAA ) PHARMACIA & UPJOHN CO.

Bienkowski MJ, Gurney M,

WPI; 2002-397167/43.

P-PSDB; ABB78599.

Human aspartyl protease 1 substrates useful in assays to detect aspartyl protease activity, e.g. for the diagnosis of Alzheimer's disease.

Example 9; Fig 6; 182pp; English.

The present invention describes a human aspartyl protease 1 (hu-Asp1) substrate (I) which comprises a peptide of no more than 50 amino acids, and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1 proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with (1) under acidic conditions; and (b) determining the level of hu-Asp1 proteolytic activity; (2) a purified polynucleotide (III) comprising a nucleotide sequence that hybridises under stringent conditions to the non-coding strand complementary to a defined 1804 nucleotide sequence (see AB525456) where the nucleotide sequence encodes a polypeptide having Asp1 proteolytic activity and lacks nucleotides encoding a transmembrane domain; (3) a purified polynucleotide (III') comprising a sequence that hybridises under stringent conditions to (III) (the nucleotide sequence encodes a polypeptide further lacking a pro-peptide domain corresponding to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV) comprising (III) or (III'), and (5) a host cell (V) transformed or transfected with (III), (III'), and/or (IV). The hu-Asp1 protease substrate (I) may be used as an enzyme substrate in assays to detect aspartyl protease activity, (II) and therefore diagnose diseases associated with aberrant hu-Asp1 expression and activity such as Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present sequence encodes human T7-human-pro-Asp-2(a)deltaTM, which is given in an example from the present invention

Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AB525466 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	35.9
Matching Percent Similarity:	20	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22  ThrGlnIhAgIyIleArGLeuProLeuArGserGlyLeuGlyAlaPr 38
43  ACCGAGCAGCGCATCCGCTCCCTGCGAGCGCCCTGGGGGCGGCC 92
38  OLeuGlyLeu
93  CCTGGGGCTG

```

Sequence name: rngp2ndb:ADJ94333

Sequence documentation:

ID ADJ94333 standard; cDNA; 1341 BP.

AC ADJ94333;

XX 03-JUN-2004 (first entry)

XX Human cDNA encoding T7-human-pro-Asp-2(a)deltaTM.

XX Human; aa; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

XX beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

XX neurotropic; neuroprotective; amyloid beta; mutant.

XX Homo sapiens.

OS Synthetic.

XX US6706485-B1.

XX 16-MAR-2004.

XX 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 99US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WO-US020881.

XX 13-OCT-1999; 99US-00416901.

PA (PMAA ) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2004-236722/22.

DR P-PSDB; ADJ94334.

XX Identifying agents that modulate activity of Asp2 aspartyl protease

PT useful for treating or preventing Alzheimer's disease involves comparing

PT APP processing activity of protease in presence and absence of test

PT agent.

XX Example 9; SEQ ID NO 21; 109pp; English.

PS The invention relates to identifying agents that modulate activity of

XX Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,

CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid

CC precursor protein (APP) in the presence and absence of a test agent,

CC where Asp2 is a recombinant polypeptide and processes APP into amyloid

CC beta, determining APP processing activity of Asp2 in presence and absence

CC of the test agent, and comparing the activities to identify agents that

CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins

CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the

CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising

CC the vector and the method of producing Hu-Asp polypeptide, an isolated

CC antibody that specifically binds to Hu-Asp polypeptides, identifying a

CC cell that can be used to screen for inhibitors of beta secretase

CC activity, novel isoforms of amyloid protein precursor (APP), where the

CC last 2 carboxy terminus amino acids of that isoform are both lysine

CC residues (e.g. those designated APP695-KK or carrying the Swedish

CC mutation where KM at 595-596 is mutated to NN, designated e.g. APP695-Sw

CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful

CC for assaying for beta secretase activity and screening for inhibitors of

CC beta-secretase) and polynucleotides that encode the APP proteins. The

CC method is useful for identifying agents that modulate the activity

CC (amyloid precursor protein processing activity) of Asp2 aspartyl

CC protease. Preferably, the method is useful for identifying agents that

CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid

CC precursor protein processing, are useful for treating or preventing

CC Alzheimer's disease. The present sequence encodes an aspartyl protease

CC mutant construct (e.g. lacking a transmembrane domain and/or including a

CC caspase cleavage site) used to investigate the cleavage activity of Asp2

CC proteins.

XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94333 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGINHSGIYIIEArgLeuProLeuArgSerGIYleuGIYAlaBr 38
|||||
43 ACCGACGACGGGATCCGGCTGCCCTGCCGACGGGCTGGGGGGCCCC 92
|||||
38 cleuGIYleu 41
|||||
93 CCTGGGGCTG 102
```

Sequence name: rngp2ndb:AD050429

Sequence documentation:  
ID AD050429 standard; DNA; 1341 BP.

AC AD050429;

XX 29-JUL-2004 (first entry)

DE T7-Human-pro-Asp-2(a)delcatm DNA.

XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;

KM Alzheimer's disease; gene therapy; human; gene; ds..

XX Homo sapiens.

OS Synthetic.

Key	Location/Qualifiers
FT CDS	1..1341
FT	/*tag= a
FT	/product= "T7-Human-pro-Asp-2(a)delcatm protein"

PN US6737510-BI.

XX 18-MAY-2004.

PF 12-APR-2000; 2000US-00548373.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA ) PHARMACIA &amp; UPJOHN CO.

PA Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

DR WPI; 2004-387112/36.

XX P-PSDB; AD050430.

XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG  
PT involved in processing amyloid precursor protein into amyloid beta,  
PT useful in preparing a composition for treating or preventing Alzheimer's  
PT disease.

XX Example 9; SEQ ID NO 21; 108bp; English.

XX The invention relates to a method for identifying an agent that decreases

CC the protease activity of the aspartyl protease (Asp) polypeptide. It also  
CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
CC cleavage site of the amyloid precursor protein (APP). The invention is  
CC useful in preparing a composition for treating or preventing Alzheimer's  
CC disease. It is also useful in gene therapy. The present sequence is T7-  
CC Human-pro-Asp-2(a)delcatm DNA. This sequence is used to illustrate the  
CC method of the invention.

XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050429 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGINHSGIYIIEArgLeuProLeuArgSerGIYleuGIYAlaBr 38
|||||
43 ACCGACGACGGGATCCGGCTGCCCTGCCGACGGGCTGGGGGGCCCC 92
|||||
38 cleuGIYleu 41
|||||
93 CCTGGGGCTG 102
```

Sequence name: rngp2ndb:ADR75342

Sequence documentation:  
ID ADR75342 standard; DNA; 1341 BP.

AC ADR75342;

XX 18-NOV-2004 (first entry)

DE T7-Human-pro-Asp-2(a)delcatm DNA.

XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;  
KM chromosome identification; Alzheimer's disease; human; gene; ds.

XX Homo sapiens.

OS Synthetic.

Key	Location/Qualifiers
FT CDS	1..1341
FT	/*tag= a
FT	/product= "T7-Human-pro-Asp-2(a)delcatm protein"

PN US2004166507-A1.

XX 26-AUG-2004.

PF 29-AUG-2003; 2003US-00652045.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (GURN/) GURNEY M E.

PA (BIEN/) BIENKOWSKI M J.

PA (HEIN/) HEINRICHSON R L.

PA (PARO/) PARODI L A.

PA (YANR/) YAN R.

XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

DR WPI; 2004-624916/60.

XX P-PSDB; ADR75343.

XX Novel purified/isolated polynucleotide encoding polypeptide having  
 PT aspartyl protease activity involved in processing amyloid precursor  
 PT protein into amyloid beta, useful in identifying agent decreasing  
 PT activity of aspartyl protease.  
 XX  
 PS Example 9; SEQ ID NO 21; 107pp; English.  
 XX  
 CC The invention relates to nucleic acid sequences encoding aspartyl  
 CC protease (Asp) polypeptides having aspartyl protease activity involved in  
 CC processing amyloid precursor protein (APP) into amyloid beta. The  
 CC invention also relates to a method for identifying an agent that  
 CC decreases the protease activity of the Asp. Asp DNA is useful in  
 CC chromosome identification as they can hybridize with a specific location  
 CC on a human chromosome and in identifying the relationship between genes  
 CC and diseases (particular gene responsible for causing diseases). It is  
 CC also useful for identifying candidates to modulate the progression of  
 CC Alzheimer's disease. Asp is useful in raising antibodies that are useful  
 CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The  
 CC present sequence is the T7-Human-pro-Asp-2(a)deltaTM DNA. This sequence  
 CC is used to illustrate the method of the invention.  
 CC  
 SO Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADR75342 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```

22 ThrGlnHieGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
43 ACCCAGCAGCGCATCCGGCTGCCCTGGCGCAGCGCCTGGGGGGCCCC 92
38 OleuGLYLeu
   |||||
93 CCTGGGGCTG                                     102

```

Sequence name: rmp2ndb:AAA15688

Sequence documentation:

ID AAA15688 standard; cDNA; 1362 BP.

XX AAA15688;

DT 03-AUG-2000 (first entry)

DE Modified human aspartyl protease 2 (Asp2) nucleotide sequence.

KW Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;  
 KM Alzheimer's disease; beta secretase site; ss.

XX Homo sapiens.

OS WO200017369-A2.

PN 30-MAR-2000.

PF 23-SEP-1999; 99WO-US020881.

PR 24-SEP-1998; 98US-0101594P.

XX (Pharm) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

PI WPI; 2000-303209/26.

DR P-PSDB; AAY8438.

XX New enzyme designated human aspartase useful in research into Alzheimer's  
 PT Disease is capable of cleaving amyloid protein precursor at the beta  
 PT secretase site to produce amyloid beta peptide.  
 XX  
 PS Example 10; Page 168-169; 183pp; English.  
 XX

CC This sequence represents a modified human aspartyl protease 2 (Asp2)  
 CC nucleotide sequence. Asp2 encoded by this sequence has the C-terminal  
 CC transmembrane domain deleted. The invention relates to a protease (e.g.  
 CC Asp2) capable of cleaving the beta secretase site of amyloid precursor  
 CC protein (APP). The protease contains a sequence encoding the amino acid  
 CC sequence DTG and a sequence encoding DSG or DTG separated by 100-300  
 CC amino acids. When mutated the APP gene causes an autosomal dominant form  
 CC of Alzheimer's disease. APP localises to the cell surface membrane and  
 CC have a single C-terminal transmembrane domain. Proteolytic processing of  
 CC APP produces the amyloid beta protein, which is possibly very important  
 CC in Alzheimer's disease. The invention includes a nucleotide sequence  
 CC encoding the protease, a vector containing the nucleotide sequence, and a  
 CC cell line comprising the vector. Methods for screening for inhibitors of  
 CC beta secretase activity are also given in the invention. The human  
 CC aspartase protein and nucleotide sequences and the methods for  
 CC identifying inhibitors of the protease, are useful in the treatment of  
 CC and research in to Alzheimer's disease  
 CC  
 SO Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAA15688 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```

22 ThrGlnHieGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGGCGCAGCGCCTGGGGGGCCCC 113
38 OleuGLYLeu
   |||||
114 CCTGGGGCTG                                     123

```

Sequence name: rmp2ndb:AA511715

Sequence documentation:

ID AA511715 standard; DNA; 1362 BP.

XX AA511715;

DT 09-SEP-2004 (revised)

DT 24-OCT-2001 (first entry)

DE DNA encoding human aspartyl protease 2a deltaTM (HuAsp-2adeltaTM).

KW Human; aspartyl protease 1; Asp-1; neurotropic; neuroprotective;

KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;

KW beta-secretase; Alzheimer's disease; ds; HuAsp-2adeltaTM.

XX Homo sapiens.

OS Unidentified.

XX Key

FT CDS

FT sig\_peptide

Location/Qualifiers

1..1362

/\*tag= b

/product= "Human Aspartyl protease-2a delta TM"

1..63

/\*tag= a

FT mat\_peptide 172..1360  
PT /\*tag= C  
XX /note= "Mature human aspartyl protease 2a deltatm"  
PN MO200149097-A2.  
XX  
XX 12-JUL-2001.  
PD  
XX 09-MAY-2001; 2001WO-1B000797.  
XX  
XX 09-MAY-2001; 2001WO-1B000797.  
XX  
XX (BIEN/) BIENKOWSKI M J.  
PA (GURNEY/) GURNEY M E.  
PA (HEIN/) HEINRIKSON R L.  
PA (PARODI/) PARODI L A.  
PA (YANR/) YAN R.  
XX  
PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
XX  
XX WPI; 2001-502548/55.  
DR P-PSDB; AAU07215.  
XX  
XX Novel purified polypeptide comprising fragment of mammalian aspartyl  
PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
PT activity.  
XX  
XX Disclosure; Page 160; 185pp; English.  
XX  
XX The invention relates to a novel purified polypeptide comprising a  
CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
CC and the fragment retain the beta-secretase activity of the mammalian Asp2  
CC protein. Also included is an isoform of amyloid protein precursor (APP)  
CC comprising the amino acid sequence of a APP or its fragment containing an  
CC APP cleavage site recognizable by a mammalian beta-secretase, and further  
CC comprising two lysine residues at the carboxyl terminus of the amino acid  
CC sequence of the mammalian APP or APP fragment. The polypeptides are used  
CC for assaying for modulators of beta-secretase activity; identifying  
CC agents that inhibit the APP processing activity of human Asp2 aspartyl  
CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2  
CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.  
CC Agents identified by the above methods are useful for treating  
CC Alzheimer's disease; and for identifying modulators of amyloid-beta  
CC (Abeta) peptide production, for use in designing therapeutics for the  
CC treatment or prevention of Alzheimer's disease. Probes and primers  
CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp  
CC nucleic acids in in vitro assays and in Northern and Southern blots. The  
CC present sequence represents the coding sequence of human Asp-2a delta TM  
CC construct which lacks the transmembrane domain. This construct was used  
CC for bacterial expression and purification of human Asp2a  
CC  
CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key  
XX  
XX Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;  
XX  
XX Alignment of: us-10-726-967a-1 x AAS11715 ..  
XX  
XX Alignment segment 1/1: (+)  
XX  
XX Matching length: 104.00 Score: 35.9  
XX Matching Percent: 100.00 Total length: 20  
XX Total Similarity: 100.00 Matching Percent Identity: 100.00  
XX Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
XX  
XX Alignment:  
XX 22 ThrGlnHSGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
XX 64 ACCGACGACGCGATCCGGCTGCCCTGGCGACGCGCTGGGGGGCGCC 113

38 oLeuGlyLeu 41  
114 CCGGCGCTG 123  
Sequence name: rngp2ndb:AA017878  
Sequence documentation:  
ID AAD17878 standard; cDNA; 1362 BP.  
AC AAD17878;  
XX  
XX 10-DEC-2001 (first entry)  
XX  
XX Human-Asp 2(a) protein lacking transmembrane domain encoding cDNA.  
XX  
XX Human; aspartyl protease 2a; Asp2a; amyloid precursor protein; APP;  
XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;  
XX amyloid plaque; neuronal loss; proteolytic; neurotropic; neuroprotective;  
XX se.  
XX  
XX Homo sapiens.  
OS Synthetic.  
XX  
XX Key location/Qualifiers  
XX CDS 1..1362  
XX /tag= a  
XX /product= "Human-Asp 2(a) protein lacking transmembrane  
XX domain"  
XX /transl\_except= (pos:640..642, aa:Gln)  
XX  
XX GB2357767-A.  
XX  
XX 04-JUL-2001.  
XX  
XX 22-SEP-2000; 2000GB-00023315.  
XX  
XX 23-SEP-1999; 99US-00404133.  
XX 23-SEP-1999; 99US-0155493P.  
XX 23-SEP-1999; 99MO-US020881.  
XX 13-OCT-1999; 99US-00416901.  
XX 06-DEC-1999; 99US-0169232P.  
XX  
XX (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
XX Bienkowski MJ, Gurney M;  
XX  
XX WPI; 2001-444208/48.  
XX P-PSDB; AAB10642.  
XX  
XX Polypeptide comprising fragments of human aspartyl protease with amyloid  
PT precursor protein processing activity and alpha-secretase activity, for  
PT identifying modulators useful in treating Alzheimer's disease.  
XX  
XX Example 10; Page 130; 187pp; English.  
XX  
XX The patent discloses human aspartyl protease 1 (Hu-Asp1) or modified Asp1  
CC proteins which lack transmembrane domain or amino terminal domain or  
CC cytoplasmic domain and retains alpha-secretase activity and amyloid  
CC protein precursor (APP) processing activity. The proteins of the  
CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which  
CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase  
CC activity, where modulators that increase hu-Asp1 alpha-secretase activity  
CC are useful for treating Alzheimer's disease (AD) which causes progressive  
CC dementia with consequent formation of amyloid plaques, neurofibrillary  
CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful  
CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein  
CC with the substrate under acidic conditions and determining the level of  
CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding  
CC human Asp 2(a) protein lacking a transmembrane (TM) domain which is  
CC generated by the deletion of the C-terminal TM domain of human Asp 2(a)  
XX protein  
XX  
XX Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD17878 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```

22 ThrcGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGAGCAGCGCATCCGGCTGCCCTCGCAGCGGCTGGGGGGCCCCC 113
38 OLeuGlyLeu
|||||
114 CCGGGGGCTG
123

```

Sequence name: rngp2ndb: AAD13034

Sequence documentation:

ID AAD13034 standard; CDNA, 1362 BP.

AC AAD13034;

DT 23-OCT-2001 (first entry)

DE Human-Asp2(a) deltaTM protein cDNA.

KW Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP; beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis; neurofibrillary tangle; neuronal loss; amyloid-beta peptide; noctropic; neuroprotective; antisense therapy; Asp2(a) deltaTM protein; gene therapy; ss.

OS Homo sapiens.

OS Synthetic.

Key Location/Qualifiers  
CDS 1..1362  
/\*tag= a  
/product= "Human Asp2(a) deltaTM protein"  
/transl\_except= (pos:640..642, aa:Gln)

FT MO200150829-A2.

PD 19-JUL-2001.

XX 09-MAY-2001; 2001MO-IB000799.

PR 09-MAY-2001; 2001MO-IB000799.

XX (BIEN/) BIENKOWSKI M J.

PA (GURN/) GURNEY M E.

PA (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.

PA (YANK/) YAN R.

PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-483072/52.

DR P-PSDB; AA06872.

PT Novel purified polypeptide comprising fragment of mammalian aspartyl

PT protease 2, lacking Asp2 transmembrane domain and retaining beta

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

PS activity.

XX Example 10; Page 160; 185pp; English.

CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid  
CC precursor protein (APP) isoforms and their corresponding DNA molecules.  
CC Human aspartyl proteases can act as beta-secretase proteases useful for  
CC treating Alzheimer's disease. APP isoforms are useful for identifying  
CC modulators of amyloid-beta peptide production, for use in designing  
CC therapeutics for the treatment and prevention of Alzheimer's disease,  
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis  
CC and neuronal loss. APP isoforms are also used in methods for identifying  
CC inhibitors and modulators of human Asp2 activity. The invention relates  
CC to a method for identifying agents that modulate the activity of human  
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
CC as a means to screen in cellular assays for the inhibitors of beta- and  
CC gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in  
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.  
CC The present cDNA sequence encodes Human aspartyl protease 2a (Hu-Asp2a).  
CC deltaTM protein which is obtained by the deletion of transmembrane domain  
CC at the C-terminal end of Hu-Asp2a. Human Asp2a has beta-secretase  
CC activity

SO Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13034 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```

22 ThrcGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGAGCAGCGCATCCGGCTGCCCTCGCAGCGGCTGGGGGGCCCCC 113
38 OLeuGlyLeu
|||||
114 CCGGGGGCTG
123

```

Sequence name: rngp2ndb: AAD06752

Sequence documentation:

ID AAD06752 standard; CDNA, 1362 BP.

AC AAD06752;

DT 10-AUG-2001 (first entry)

DE Human-Asp-2(a) delta TM protein cDNA.

KW Human; alpha-secretase; amyloid precursor protein; APP; therapy; Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp2a;

KW beta-secretase; Asp-2a delta TM; mutant; ss.

OS Homo sapiens.

OS Synthetic.

Key Location/Qualifiers  
CDS 1..1362  
/\*tag= a  
/product= "Human-Asp-2(a) delta TM protein"  
/transl\_except= (pos:640..642, aa:Gln)

FT MO200123533-A2.

PD 05-APR-2001.

XX 22-SEP-2000; 2000MO-US026080.

PF 23-SEP-1999; 99US-015493P.

XX

PR 23-SEP-1999; 99MO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 PR 06-DEC-1999; 99US-0169232P.  
 XX  
 XX  
 PA (PHAA ) PHARMACIA & UPJOHN CO.  
 XX  
 PI Gurney M, Bienkowski MJ;  
 XX WPI, 2001-290516/30.  
 DR P-PSDB; AA025594.  
 XX  
 PT Enzymes that cleave the alpha-secretase site of the amyloid precursor  
 protein, useful for the treatment of Alzheimer's disease.  
 XX  
 PS Example 10; Page 158-159, 189pp; English.  
 XX  
 CC The present invention relates to enzymes for cleaving the alpha-  
 CC secretase site of the amyloid precursor protein (APP) and methods of  
 CC identifying those enzymes. The methods may be used to identify enzymes  
 CC that may be used to cleave the alpha-secretase cleavage site of the APP  
 CC protein. The enzymes may be used to treat or modulate the progress of  
 CC Alzheimer's disease. The present sequence is a cDNA encoding human  
 CC Aspartyl protease 2a (Asp-2a) deltaTM protein which is obtained by  
 CC deleting its transmembrane domain. This sequence has beta-secretase  
 CC protease activity  
 XX  
 SQ Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x AAD06752 ..  
 Alignment segment 1/1: (+)  
 Matching length: 104.00 Total length: 35.9  
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
 Gaps: 0  
 Alignment:  
 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
 64 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGCTGGGGGGGGCCCC 113  
 38 OLeuGlyLeu 41  
 114 CCGGGGGGGCTG 123  
 Sequence name: rmgp2ndb:AA11530  
 Sequence documentation:  
 ID AA11530 standard; cDNA; 1362 BP.  
 AC AA11530;  
 XX  
 DT 24-OCT-2001 (first entry)  
 XX  
 DE Human cDNA encoding Human-pro-Asp 2(a) delta TM.  
 XX  
 KW Human: Aspartyl protease; beta-secretase; nootropic; ASP2;  
 KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;  
 KW amyloid-beta; Abeta; Human-pro-Asp 2(a) delta TM; ser mutant.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 FH Key location/Qualifiers  
 FT CDS 1..1362  
 FT /\*tag= a  
 FT /product= "Human-pro-Asp 2(a) delta TM"  
 FT /transl\_except= (pos:639..642,aa:Gln)  
 FT 1..63  
 FT /\*tag= b

FT mat\_peptide 64..1359  
 FT /\*tag= C  
 FT /label= Mature\_Human\_pro-Asp\_2(a)\_delta\_TM  
 XX  
 XX  
 PN MO200149098-A2.  
 XX  
 PD 12-JUL-2001.  
 XX  
 XX  
 PF 09-MAY-2001, 2001MO-IB000798.  
 XX  
 PR 09-MAY-2001, 2001MO-IB000798.  
 XX  
 XX  
 PA (BIEN/) BIENKOWSKI M J.  
 PA (GURN/) GURNEY M E.  
 PA (HEIN/) HEINRIKSON R L.  
 PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.  
 XX  
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 XX WPI, 2001-502549/55.  
 DR P-PSDB; AA06616.  
 XX  
 DR  
 DR  
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.  
 XX  
 XX  
 PS Example 10; Page 160; 185pp; English.  
 XX  
 CC The invention relates to a purified polypeptide comprising a fragment of  
 CC mammalian aspartyl protease (Asp2) protein which lacks the Asp2  
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and  
 CC the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. The invention also details polynucleotides for the Asp proteins  
 CC and vectors expressing them, and a polypeptide (isoform of amyloid  
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or  
 CC its fragment containing an APP cleavage site recognizable by a mammalian  
 CC beta-secretase, and further comprising two lysine residues at the  
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP  
 CC fragment. Also included in the invention are methods of identifying  
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
 CC useful for treating Alzheimer's disease. APP is useful in methods for  
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-  
 CC beta (Abeta) peptide production. APP is also useful in designing  
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP  
 CC comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is  
 CC associated with increased levels of Abeta processing is useful in assays  
 CC relating the Alzheimer's research. The expression vector is useful for  
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp  
 CC oligonucleotides are useful as probes or primers. The probes are useful  
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and  
 CC Southern blots. The present sequence encodes Human-pro-Asp 2(a) delta TM  
 CC protein, which lacks the C-terminal transmembrane domain  
 XX  
 SQ Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x AA11530 ..  
 Alignment segment 1/1: (+)  
 Matching length: 104.00 Total length: 35.9  
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
 Gaps: 0  
 Alignment:  
 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
 64 ACCGACGACGGCATCCGGCTGCCCTGGCAGCGGCTGGGGGGGGCCCC 113

38 OLeuGIYLeu  
 |||||  
 114 CCGGGGCTG

41  
 123

Sequence name: rngp2ndb:ABL52470

Sequence documentation:

ID ABL52470 standard; cDNA; 1362 BP.

AC ABL52470;

DT 16-JUN-2002 (first entry)

DE Human Asp-2(a)deltaTM nucleotide sequence SEQ ID NO:29.

KW Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;  
 KM chromosome 11q23.3-24.1; gene; ss.

OS Homo sapiens.

Key Location/Qualifiers

FT CDS 1..1362

FT /tag= "a

FT /product= "Human Asp-2(a)delta TM"

FT /transl\_except= (pos:640..642,aa:Gln)

Sequence name: rngp2ndb:ADJ94341

GB2367060-A.

27-MAR-2002.

29-OCT-2001; 2001GB-00025934.

23-SEP-1999; 99US-00404133.

23-SEP-1999; 99US-0155493P.

23-SEP-1999; 99WO-US020881.

13-OCT-1999; 99US-00416901.

06-DEC-1999; 99US-0169232P.

22-SEP-2000; 2000GB-00023315.

(PHAA ) PHARMACIA & UPJOHN CO.

Blenkowsk1 MJ, Gurney M;

WPI; 2002-397167/43.

P-PSDB; ABB78603.

Human aspartyl protease 1 substrates useful in assays to detect aspartyl

protease activity, e.g. for the diagnosis of Alzheimer's disease.

Example 10; Page 130; 182pp; English.

The present invention describes a human aspartyl protease 1 (hu-Asp1)

substrate (I) which comprises a peptide of no more than 50 amino acids,

and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-

Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1

proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with

(1) under acidic conditions; and (b) determining the level of hu-Asp1

proteolytic activity; (2) a purified polynucleotide (III) comprising a

nucleotide sequence that hybridizes under stringent conditions to the non

-coding strand complementary to a defined 1804 nucleotide sequence (see

ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1

domain; (3) a purified polynucleotide (III') comprising a sequence that

hybridizes under stringent conditions to (III) (the nucleotide sequence

encodes a polypeptide further lacking a pro-peptide domain corresponding

to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)

comprising (III) or (III') and (5) a host cell (V) transformed or

transfected with (III), (III') and/or (IV). The hu-Asp1 protease

substrate (I) may be used as an enzyme substrate in assays to detect

aspartyl protease activity, (II) and therefore diagnose diseases

associated with aberrant hu-Asp1 expression and activity such as

Alzheimer's disease. Hu-Asp1 has been localized to chromosome 21, while

hu-Asp2 has been localized to chromosome 11q23.3-24.1. The present

CC sequence encodes human Asp-2(a)deltaTM, which is given in an example from  
 CC the present invention

XX Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL52470 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	35.9
Matching	Percent	100.00	Total	Length: 20
Total	Percent	100.00	Total	Identity: 100.00
Gaps:		0	Total	Identity: 100.00

Alignment:

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAsp 38  
 64 ACCCGACGCGGCGATCCGCGTCCCTCGCGACGCGGCGGCGGCC 113  
 38 OLeuGIYLeu  
 |||||  
 114 CCGGGGCTG 123

Sequence name: rngp2ndb:ADJ94341

Sequence documentation:

ID ADJ94341 standard; cDNA; 1362 BP.

AC ADJ94341;

DT 03-JUN-2004 (first entry)

DE Human-pro-Asp-2(a)deltaTM cDNA.

KW Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

neurotropic; neuroprotective; amyloid beta; mutant.

OS Homo sapiens.

Synthetic.

US6706485-B1.

16-MAR-2004.

12-APR-2000; 2000US-00548376.

24-SEP-1998; 98US-0101594P.

23-SEP-1999; 99US-00404133.

23-SEP-1999; 99US-0155493P.

23-SEP-1999; 99WO-US020881.

13-OCT-1999; 99US-00416901.

(PHAA ) PHARMACIA & UPJOHN CO.

Gurney ME, Blenkowski MJ, Heinriksen RL, Parodi LA, Yan R;

WPI; 2004-236722/22.

P-PSDB; ADJ94342.

Identifying agents that modulate activity of Asp2 aspartyl protease

useful for treating or preventing Alzheimer's disease involves comparing

APP processing activity of protease in presence and absence of test

agent.

Example 10; SEQ ID NO 29; 109pp; English.

The invention relates to identifying agents that modulate activity of

Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,

encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid

precursor protein (APP) in the presence and absence of a test agent,



CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated  
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy terminal amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw  
 CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the activity  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease. Preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease  
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a  
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2  
 CC proteins.

CC Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94341 ..

Alignment segment 1/1: (+)

Matching length:	104.00	20	Escore:	35.9
Matching Percent Similarity:	100.00	20	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	20	Total Percent Identity:	100.00
Gaps:	0	0		

Alignment:

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22 ThrGlnH1sglyI1eArgLeuProLeuAArgserGlyLeuGlyAlaPr 38
64 ACCGAGCAAGGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGCCCC 113
38 OleuGlyLeu
114 CCTGGGGGCTG
41
123

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Sequence name: ringp2ndb:AD050437

Sequence documentation:

ID AD050437 standard; DNA; 1362 BP.

AC AD050437;

DT 29-JUL-2004 (first entry)

DE Human Asp-2(a)deltaTM mutant DNA.

KM Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;

KM Alzheimer's disease; gene therapy; human; gene; mutant; de.

OS Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1362

FT /tag= a

XX US6737510-B1.

XX 18-MAY-2004.

XX 12-APR-2000; 2000US-00548373.  
 XX 24-SEP-1998; 98US-0101594P.  
 XX 23-SEP-1999; 99US-0040413P.  
 XX 23-SEP-1999; 99US-015493P.  
 XX 23-SEP-1999; 99MO-US02081.  
 XX 13-OCT-1999; 99US-00416901.  
 XX (PHMA ) PHARMACIA & UPJOHN CO.  
 XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
 XX WPI: 2004-387112/36.  
 XX P-PSDB; AD050438.  
 XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG  
 XX involved in processing amyloid precursor protein into amyloid beta,  
 XX PT useful in preparing a composition for treating or preventing Alzheimer's  
 XX disease.  
 XX Example 10; SEQ ID NO 29; 108bp; English.  
 XX PS The invention relates to a method for identifying an agent that decreases  
 XX CC the protease activity of the aspartyl protease (Asp) polypeptide. It also  
 XX CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
 XX CC cleavage site of the amyloid precursor protein (APP). The invention is  
 XX CC useful in preparing a composition for treating or preventing Alzheimer's  
 XX CC disease. It is also useful in gene therapy. The present sequence is human  
 XX CC Asp-2(a)deltaTM mutant DNA. This sequence is used to illustrate the  
 XX CC method of the invention.

CC Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050437 ..

Alignment segment 1/1: (+)

Matching length:	104.00	20	Escore:	35.9
Matching Percent Similarity:	100.00	20	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	20	Total Percent Identity:	100.00
Gaps:	0	0		

Alignment:

```

22 ThrGlnH1sglyI1eArgLeuProLeuAArgserGlyLeuGlyAlaPr 38
64 ACCGAGCAAGGCATCCGGCTGCCCTGGCGCAGCGGCTGGGGGGCCCC 113
38 OleuGlyLeu
114 CCTGGGGGCTG
41
123

```

Sequence name: ringp2ndb:ADR75350

Sequence documentation:

ID ADR75350 standard; DNA; 1362 BP.

AC ADR75350;

DT 18-NOV-2004 (first entry)

DE Human Asp-2(a)deltaTM mutant DNA.

KM Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;

KM chromosome identification; Alzheimer's disease; human; mutant; gene; de.

OS Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1362

```

FT      /tag= a
FT      /product= "Human Asp-2(a)deltaTM mutant protein"
FT      /transl_except= (pos:640..642, aa:Gln)
XX
XX      US2004166507-A1.
XX
XX      26-AUG-2004.
XX
XX      29-AUG-2003; 2003US-00652045.
XX
XX      24-SEP-1998; 98US-0101594P.
XX      23-SEP-1999; 99US-00404133.
XX      23-SEP-1999; 99US-0155493P.
XX      13-OCT-1999; 99US-00416901.
XX
XX      (GURN/) GURNEY M. E.
XX      (BIEN/) BIENKOWAKI M. J.
XX      (HEIN/) HEINRIKSON R. L.
XX      (PARO/) PARODI L. A.
XX      (YANR/) YAN R.
XX
XX      Gurney ME, Bienkowiaki MJ, Heinrichson RL, Parodi LA, Yan R;
XX      WPI; 2004-624916/60.
XX      P-PSDB; ADR75351.
XX
XX      Novel purified/isolated polynucleotide encoding polypeptide having
XX      aspartyl protease activity involved in processing amyloid precursor
XX      protein into amyloid beta, useful in identifying agent decreasing
XX      activity of aspartyl protease.
XX
XX      Example 10; SEQ ID NO 29; 107pp; English.
XX
XX      The invention relates to nucleic acid sequences encoding aspartyl
XX      protease (Asp) polypeptides having aspartyl protease activity involved in
XX      processing amyloid precursor protein (APP) into amyloid beta. The
XX      invention also relates to a method for identifying an agent that
XX      decreases the protease activity of the Asp. Asp DNA is useful in
XX      chromosome identification as they can hybridize with a specific location
XX      on a human chromosome and in identifying the relationship between genes
XX      and diseases (particular gene responsible for causing diseases). It is
XX      also useful for identifying candidates to modulate the progression of
XX      Alzheimer's disease. Asp is useful in raising antibodies that are useful
XX      in diagnostic assay for detecting Hu-Asp polypeptide expression. The
XX      present sequence is the human Asp-2(a)deltaTM mutant DNA. This sequence
XX      is used to illustrate the method of the invention.
XX
XX      Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;
XX
XX      Alignment of: us-10-726-967a-1 x ADR75350 ..
XX
XX      Alignment segment 1/1: (+)
XX
XX      Matching length: 104.00      Total length: 35.9
XX      Matching Percent: 100.00      Matching Percent Identity: 20
XX      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
XX      Gaps: 0
XX
XX      Alignment:
XX
XX      22 ThrGlnHlglylleArgLeuProLeuArgSerGlyLeuGlyAla1APR 38
XX      64 ACCGACGACGGGCAATCCGGCTGCGCAGCGGCGCTGGGGGGGCCCC 113
XX      38 OLeuGlyLeu
XX      114 CTTGGGGGCTG
XX      123
XX
XX      Sequence name: rngp2ndb:ADC81562
XX
XX      Sequence documentation:
XX      ID ADC81562 standard; DNA, 1365 BP.

```

```

XX      AC      ADC81562;
XX      DT      01-JAN-2004 (first entry)
XX      DE      Recombinant BACE encoding DNA from pET11a-P33K-BACE SEQ ID NO:8.
XX      KW      human; BACE; modification; Pro33lys; pro-enzyme; gene; ds.
XX      OS      Synthetic.
XX      OS      Homo sapiens.
XX      FH      Key
XX      FT      CDS
XX      FT      Location/Qualifiers
XX      FT      /tag= b
XX      FT      /product= "recombinant BACE P33K"
XX      FT      sig_peptide
XX      FT      1..69
XX      FT      mat_peptide
XX      FT      70..1365
XX      FT      /tag= a
XX      FT      /tag= c
XX      FT      /product= "mature recombinant P33K BACE (seqid:2)"
XX
XX      PN      WO2003072733-A2.
XX
XX      PD      04-SEP-2003.
XX
XX      PR      21-FEB-2003; 2003WO-US005508.
XX      21-FEB-2002; 2002US-0358651P.
XX
XX      PA      (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX      PI      Chou K, Howe JW;
XX
XX      DR      WPI; 2003-712719/67.
XX      DR      P-PSDB; ADC81563, ADC81561.
XX
XX      PT      BACE polypeptides having Pro33lys modification, useful in determining
XX      PT      possible mutations, which will inhibit enzyme activity, and in
XX      PT      determining potential active site for target molecules.
XX
XX      PS      Claim 13; Fig 4A-B; 38pp; English.
XX
XX      CC      The present invention describes an isolated polypeptide (1) comprising or
XX      CC      consisting of a fully defined sequence of 432 amino acids (see ADC81561),
XX      CC      and comprising human BACE having the modification Pro33lys. Also
XX      CC      described: (1) a composition comprising an active human BACE enzyme
XX      CC      comprising the pro-enzyme sequence of BACE having the modification
XX      CC      Pro33lys; (2) an isolated polynucleotide comprising a sequence encoding
XX      CC      (1); (3) an isolated polynucleotide comprising or comprising of
XX      CC      nucleotides 70-1365 of a 1355-bp sequence (see ADC81562); (4) an
XX      CC      expression vector comprising the polynucleotide of (2), or a
XX      CC      polynucleotide sequence encoding a Pro33lys-BACE polypeptide, where the
XX      CC      expression vector can produce the Pro33lys-BACE polypeptide when present
XX      CC      in a compatible host cell, when cultured under conditions that allow
XX      CC      production; (5) a recombinant host cell comprising the expression vector;
XX      CC      and (6) producing a (active) Pro33lys-BACE polypeptide. The BACE
XX      CC      polypeptide having Pro33lys modification may be used in determining
XX      CC      possible mutations, which will inhibit enzyme activity, and in
XX      CC      determining potential active site for target molecules. The vector
XX      CC      comprising the BACE polynucleotide is useful for producing recombinant
XX      CC      BACE polypeptides having Pro33lys modification. The present sequence
XX      CC      encodes recombinant BACE expressed from a pET11a-P33K-BACE construct,
XX      CC      from the present invention.
XX
XX      SQ      Sequence 1365 BP; 296 A; 382 C; 394 G; 293 T; 0 U; 0 Other;
XX
XX      Alignment of: us-10-726-967a-1 x ADC81562 ..
XX
XX      Alignment segment 1/1: (+)
XX
XX      Matching length: 104.00      Total length: 35.9
XX      Matching Percent: 100.00      Total length: 20

```

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

```
22 ThrglnHtSGlytLeArgLeuProleuArgSerGlyLeuGlyAlaPr 38
70 ACCCAACATGGATTCTGTGCTGCGATGCGGATCTGGAGTGTCTCC 119
38 OLeuGlyLeu 41
120 ACTGGGTCTG 129
```

Sequence name: rngp2ndb:ADJ57780

Sequence documentation:

ID ADJ57780 standard; DNA; 1365 BP.

AC ADJ57780;

DT 06-MAY-2004 (first entry)

DE DNA sequence for BACE WT R57DEL.

KM beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;

KW Alzheimer's disease; ds.

XX Synthetic.

OS Synthetic.

FH Key Location/Qualifiers

FT CDS 1..1365

FT /tag= a

FT /product= "BACE protein"

XX MO2004011641-A2.

XX PD 05-FEB-2004.

XX PF 25-JUL-2003; 2003MO-GB003200.

XX PR 26-JUL-2002; 2002US-0398681P.

XX PA (ASTE-) ASTEX TECHNOLOGY LTD.

XX PI Vuillard LM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

XX DR WPI; 2004-169242/16.

XX DR P-PSDB; ADJ57781.

XX PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or

XX PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's

XX PT syndrome.

XX PS Disclosure; SEQ ID NO 9; 145pp; English.

XX CC The present invention relates to a beta site APP cleaving enzyme (BACE)

XX CC protein. The compound or the composition is useful in medicine and the

XX CC BACE crystal structure is useful for drug discovery. The BACE protein,

XX CC compounds, pharmaceutical compositions, medicament, drug or other

XX CC composition comprising the compound is useful for treating or preventing

XX CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The

XX CC present sequence represents the DNA sequence for a BACE encoding

XX CC sequence.

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

```
22 ThrglnHtSGlytLeArgLeuProleuArgSerGlyLeuGlyAlaPr 38
70 ACCCAACATGGATTCTGTGCTGCGATGCGGATCTGGAGTGTCTCC 119
38 OLeuGlyLeu 41
120 CCTGGGCTG 129
```

Sequence name: rngp2ndb:ADJ57772

Sequence documentation:

ID ADJ57772 standard; DNA; 1368 BP.

AC ADJ57772;

DT 06-MAY-2004 (first entry)

DE DNA sequence for BACE WT.

KM beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;

KW Alzheimer's disease; ds.

XX Synthetic.

OS Synthetic.

FH Key Location/Qualifiers

FT CDS 1..1368

FT /tag= a

FT /product= "BACE protein"

XX MO2004011641-A2.

XX PD 05-FEB-2004.

XX PF 25-JUL-2003; 2003MO-GB003200.

XX PR 26-JUL-2002; 2002US-0398681P.

XX PA (ASTE-) ASTEX TECHNOLOGY LTD.

XX PI Vuillard LM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

XX DR WPI; 2004-169242/16.

XX DR P-PSDB; ADJ57773.

XX PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or

XX PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's

XX PT syndrome.

XX PS Disclosure; SEQ ID NO 1; 145pp; English.

XX CC The present invention relates to a beta site APP cleaving enzyme (BACE)

XX CC protein. The compound or the composition is useful in medicine and the

XX CC BACE crystal structure is useful for drug discovery. The BACE protein,

XX CC compounds, pharmaceutical compositions, medicament, drug or other

XX CC composition comprising the compound is useful for treating or preventing

XX CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The

XX CC present sequence represents the DNA sequence for a BACE encoding

XX CC sequence.

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

```
22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
70 ACCCAGCAGCGCATCCGGCTGCCCTCGCAGCGGCTGGGGGGCGCCCC 119
|||
38 cleuGlyLeu 41
|||||
120 CCTGGGGCTG 129
```

Sequence name: rngp2ndb:ADJ57784

Sequence documentation:

ID ADJ57784 standard; DNA, 1368 BP.

AC ADJ57784;

DT 06-MAY-2004 (first entry)

DE DNA sequence for BACE N-Q R56KR57KnoHs.

KW beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;

KM Alzheimer's disease; ds.

OS Synthetic.

FH Key Location/Qualifiers

FT CDS 1..1368

FT /\*tag= a

FT /product= "BACE protein"

PN MO2004011641-A2.

PD 05-FEB-2004.

PF 25-JUL-2003; 2003WO-GB003200.

PR 26-JUL-2002; 2002US-0398681P.

PA (ASTE-) ASTEX TECHNOLOGY LTD.

PI Vuillard LM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

DR WPI; 2004-169242/16.

DR P-PSDB; ADJ57785.

PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or

PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's

PT syndrome.

PS Disclosure; SEQ ID NO 13; 145bp; English.

PS The present invention relates to a beta site APP cleaving enzyme (BACE)

CC protein. The compound or the composition is useful in medicine and the

CC BACE crystal structure is useful for drug discovery. The BACE protein,

CC compounds, pharmaceutical compositions, medicament, drug or other

CC composition comprising the compound is useful for treating or preventing

CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The

CC present sequence represents the DNA sequence for a BACE encoding

CC sequence.

SQ Sequence 1368 BP; 290 A; 392 C; 403 G; 283 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ57784 ..

Alignment segment 1/1: (+)

Quality: 104.00  
Matching length: 20Score: 35.9  
Total length: 20

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

Alignment:

```
22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
70 ACCCAGCAGCGCATCCGGCTGCCCTCGCAGCGGCTGGGGGGCGCCCC 119
|||
38 cleuGlyLeu 41
|||||
120 CCTGGGGCTG 129
```

Sequence name: rngp2ndb:ADJ57778

Sequence documentation:

ID ADJ57778 standard; DNA, 1368 BP.

AC ADJ57778;

DT 06-MAY-2004 (first entry)

DE DNA sequence for BACE WT R57K.

KW beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;

KM Alzheimer's disease; ds.

OS Synthetic.

FH Key Location/Qualifiers

FT CDS 1..1368

FT /\*tag= a

FT /product= "BACE protein"

PN MO2004011641-A2.

PD 05-FEB-2004.

PF 25-JUL-2003; 2003WO-GB003200.

PR 26-JUL-2002; 2002US-0398681P.

PA (ASTE-) ASTEX TECHNOLOGY LTD.

PI Vuillard LM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

DR WPI; 2004-169242/16.

DR P-PSDB; ADJ57779.

PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or

PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's

PT syndrome.

PS Disclosure; SEQ ID NO 7; 145bp; English.

PS The present invention relates to a beta site APP cleaving enzyme (BACE)

CC protein. The compound or the composition is useful in medicine and the

CC BACE crystal structure is useful for drug discovery. The BACE protein,

CC compounds, pharmaceutical compositions, medicament, drug or other

CC composition comprising the compound is useful for treating or preventing

CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The

CC present sequence represents the DNA sequence for a BACE encoding

CC sequence.

Alignment of: us-10-726-967a-1 x ADJ57778 ..

Alignment segment 1/1: (+)

Quality: 104.00  
Matching length: 20Score: 35.9  
Total length: 20

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||
70 ACCCAGCAGCAGCATCCGCTGCCCTGCCAGCGGCTGGGGGGGCCCC 119
|||
38 OLeuGlyLeu 41
|||
120 CCTGGGGCTG 129
```

Sequence name: rmgp2ndb:ADJ57776

## Sequence documentation:

ID ADJ57776 standard; DNA; 1368 BP.

AC ADJ57776;

DT 06-MAY-2004 (first entry)

DE DNA sequence for BACE WT\_R56KR57K.

KW beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;  
KW Alzheimer's disease; ds.

XX Synthetic.

OS Synthetic.

FH Key: Location/Qualifiers

FT CDS 1..1368

FT /tag= a

FT /product= "BACE protein"

XX WO2004011641-A2.

XX PD 05-FEB-2004.

XX PF 25-JUL-2003; 2003WO-GB003200.

XX PR 26-JUL-2002; 2002US-0398681P.

XX PA (ASTE-) ASTEX TECHNOLOGY LTD.

XX PI Vuillard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

XX DR WPI; 2004-169242/16.

XX P-PSDB; ADJ57777.

XX PS New beta site APP cleaving enzyme (BACE) protein, useful for treating or

XX PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's

XX PT syndrome.

XX CC Disclosure; SEQ ID NO 5; 145pp; English.

XX CC The present invention relates to a beta site APP cleaving enzyme (BACE)

XX CC protein. The compound or the composition is useful in medicine and the

XX CC BACE crystal structure is useful for drug discovery. The BACE protein,

XX CC composition, pharmaceutical compositions, medicament, drug or other

XX CC composition comprising the compound is useful for treating or preventing

XX CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The

XX CC present sequence represents the DNA sequence for a BACE encoding

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||
70 ACCCAGCAGCAGCATCCGCTGCCCTGCCAGCGGCTGGGGGGGCCCC 119
|||
38 OLeuGlyLeu 41
|||
120 CCTGGGGCTG 129
```

Sequence name: rmgp2ndb:ACC84850

## Sequence documentation:

ID ACC84850 standard; DNA; 1371 BP.

AC ACC84850;

DT 12-SEP-2003 (first entry)

DE Human promemapsin 2-T1 protein encoding DNA.

KW Memapsin 1; nootropic; neuroprotective; memapsin 2; beta secretase;  
KW beta-amyloid protein; Alzheimer's disease; promemapsin 2-T1; human; gene;  
KW ds.

XX Homo sapiens.

OS Homo sapiens.

FH Key: Location/Qualifiers

FT CDS 1..1371

FT /tag= a

FT /product= "promemapsin 2-T1"

XX WO2003039454-A2.

XX PD 15-MAY-2003.

XX PF 23-OCT-2002; 2002WO-US034324.

XX PR 23-OCT-2001; 2001US-0335952P.

XX PR 27-NOV-2001; 2001US-033545P.

XX PR 14-JAN-2002; 2002US-0348464P.

XX PR 14-JAN-2002; 2002US-0348615P.

XX PR 20-JUN-2002; 2002US-0390804P.

XX PR 19-JUL-2002; 2002US-0397557P.

XX PR 19-JUL-2002; 2002US-0397619P.

XX PA (OKLA-) OKLAHOMA MEDICAL RES FOUND.

XX PI Ghosh AK, Tang J, Balcer G, Chang W, Hong L, Koelsch G, Loy J;

XX PI Turner RT.

XX DR WPI; 2003-541410/51.

XX P-PSDB; ABR61929.

XX PT New peptide compounds are memapsin beta secretase inhibitors used for

XX PT treating Alzheimer's disease.

XX CC Example; Fig 10; 407pp; English.

XX CC The invention relates to peptide compounds of specified formula. The

Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0

## Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
|||
70 ACCCAGCAGCAGCATCCGCTGCCCTGCCAGCGGCTGGGGGGGCCCC 119
|||
38 OLeuGlyLeu 41
|||
120 CCTGGGGCTG 129
```

Sequence name: rmgp2ndb:ACC84850

## Sequence documentation:

ID ACC84850 standard; DNA; 1371 BP.

AC ACC84850;

DT 12-SEP-2003 (first entry)

DE Human promemapsin 2-T1 protein encoding DNA.

KW Memapsin 1; nootropic; neuroprotective; memapsin 2; beta secretase;  
KW beta-amyloid protein; Alzheimer's disease; promemapsin 2-T1; human; gene;  
KW ds.

XX Homo sapiens.

OS Homo sapiens.

FH Key: Location/Qualifiers

FT CDS 1..1371

FT /tag= a

FT /product= "promemapsin 2-T1"

XX WO2003039454-A2.

XX PD 15-MAY-2003.

XX PF 23-OCT-2002; 2002WO-US034324.

XX PR 23-OCT-2001; 2001US-0335952P.

XX PR 27-NOV-2001; 2001US-033545P.

XX PR 14-JAN-2002; 2002US-0348464P.

XX PR 14-JAN-2002; 2002US-0348615P.

XX PR 20-JUN-2002; 2002US-0390804P.

XX PR 19-JUL-2002; 2002US-0397557P.

XX PR 19-JUL-2002; 2002US-0397619P.

XX PA (OKLA-) OKLAHOMA MEDICAL RES FOUND.

XX PI Ghosh AK, Tang J, Balcer G, Chang W, Hong L, Koelsch G, Loy J;

XX PI Turner RT.

XX DR WPI; 2003-541410/51.

XX P-PSDB; ABR61929.

XX PT New peptide compounds are memapsin beta secretase inhibitors used for

XX PT treating Alzheimer's disease.

XX CC Example; Fig 10; 407pp; English.

XX CC The invention relates to peptide compounds of specified formula. The

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```

22 ThGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
70 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGCGCTGGGGGCGGCC 119
38 oLeuGlyLeu
120 CTTGGGGCTG 41
129

```

Sequence name: rngp2ndb:AAA15689

Sequence documentation:

ID AAA15689 standard; CDNA, 1380 BP.

AC AAA15689;

DT 03-AUG-2000 (first entry)

DE Modified human aspartyl protease 2 (Asp2) nucleotide sequence.

KM Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;

KM Alzheimer's disease; beta secretase site; ss.

OS Homo sapiens.

PN WO200017369-A2.

XX 30-MAR-2000.

PF 23-SEP-1999; 99WO-US020881.

PR 24-SEP-1998; 98US-0101594P.

PA (PHAA ) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2000-303209/26.

DR P-PSDB; AAY88439.

PT New enzyme designated human aspartase useful in research into Alzheimer's Disease is capable of cleaving amyloid protein precursor at the beta secretase site to produce amyloid beta peptide.

PS Example 10; Page 172-173; 183pp; English.

CC This sequence represents a modified human aspartyl protease 2 (Asp2) nucleotide sequence. Asp2 encoded by this sequence has the C-terminal transmembrane domain deleted. The invention relates to a protease (e.g. Asp2) capable of cleaving the beta secretase site of amyloid precursor protein (APP). The protease contains a sequence encoding the amino acid sequence DTG and a sequence encoding DSG or DTG separated by 100-300 amino acids. When mutated the APP gene causes an autosomal dominant form of Alzheimer's disease. APP localises to the cell surface membrane and have a single C-terminal transmembrane domain. Proteolytic processing of APP produces the amyloid beta protein, which is possibly very important in Alzheimer's disease. The invention includes a nucleotide sequence encoding the protease, a vector containing the nucleotide sequence and a cell line comprising the vector. Methods for screening for inhibitors of beta secretase activity are also given in the invention. The human aspartase protein and nucleotide sequences and the methods for identifying inhibitors of the protease, are useful in the treatment of and research in to Alzheimer's disease

XX SQ Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAA15689 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```

22 ThGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
64 ACCCAGCAGCGCATCCGGCTGCCCTGCGCAGCGCGCTGGGGGCGGCC 113
38 oLeuGlyLeu
114 CTTGGGGCTG 41
123

```

Sequence name: rngp2ndb:AAA15669

Sequence documentation:

ID AAA15669 standard; DNA, 1380 BP.

AC AAA15669;

DT 15-SEP-2003 (revised)

DT 06-AUG-2003 (revised)

DT 03-AUG-2000 (first entry)

DE T7-caspase-human-pro-Asp-2(a)-deltaTM nucleotide sequence.

KM Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2; ss;

KM Alzheimer's disease; beta secretase site;

KM T7-caspase-human-pro-Asp-2(a)-deltaTM.

OS Homo sapiens;

OS Enterobacteria phage T7.

OS Chimeric.

PN WO200017369-A2.

XX 30-MAR-2000.

PF 23-SEP-1999; 99WO-US020881.

PR 24-SEP-1998; 98US-0101594P.

PA (PHAA ) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2000-303209/26.

DR P-PSDB; AAY88432.

PT New enzyme designated human aspartase useful in research into Alzheimer's Disease is capable of cleaving amyloid protein precursor at the beta secretase site to produce amyloid beta peptide.

PS Example 9; Fig 7; 183pp; English.

CC This sequence represents a modified version of the human aspartase 2 (Asp2) nucleotide sequence. The sequence is used in the bacterial expression of human Asp2L. The invention relates to a protease (e.g. Asp2) capable of cleaving the beta secretase site of amyloid precursor protein (APP). The protease contains a sequence encoding the amino acid sequence DTG and a sequence encoding DSG or DTG separated by 100-300 amino acids. When mutated the APP gene causes an autosomal dominant form of Alzheimer's disease. APP localises to the cell surface membrane and

CC have a single C-terminal transmembrane domain, proteolytic processing of  
 CC APP produces the amyloid beta protein, which is possibly very important  
 CC in Alzheimer's disease. The invention includes a nucleotide sequence  
 CC encoding the protease, a vector containing the nucleotide sequence, and a  
 CC cell line comprising the vector. Methods for screening for inhibitors of  
 CC beta secretase activity are also given in the invention. The human  
 CC aspartase protein and nucleotide sequences and the methods for  
 CC identifying inhibitors of the protease, are useful in the treatment of  
 CC and research in to Alzheimer's disease. (Updated on 06-AUG-2003 to  
 CC correct OS field.) (Updated on 15-SEP-2003 to standardise OS field)  
 XX

Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS115669 ..

Alignment segment 1/1: (+)	Quality:	Score:
Matching length: 20	104.00	35.9
Matching Percent Similarity: 100.00	Total length: 20	
Total Percent Identity: 100.00	Matching Percent Identity: 100.00	
Gaps: 0	Total Percent Identity: 100.00	

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22 ThrGlnHisGlyIleArgLeuProleuArgSerGlyLeuGlyValAlaPr 38
|||
82 ACCGACGACGGGATCCGGCTGCTGCGCACGGGCTGGGGGGGCGCC 131
|||
38 OleuGlyLeu 41
|||
132 CCTGGGGCTG 141

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Sequence name: rmp2ndb:AAS11712

Sequence documentation:

ID AAS11712 standard; DNA; 1380 BP.

AC AAS11712;

XX 11-SEP-2003 (revised)

DT 24-OCT-2001 (first entry)

XX DNA encoding T7-caspase-human aspartyl protease 2a deltaTM.

XX Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;

KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;

KM beta-secretase; Alzheimer's disease; ds; T7-caspase-HuAsp-2adeltaTM.

XX Homo sapiens.

OS Enterobacteria phage T7.

XX Key location/Qualifiers

FT CDS 1..1380

FT sig\_peptide 1..81

FT mat\_peptide 82..1377

FT /note= "Mature T7-caspase-aspartyl protease-2a delta TM"

XX WO200149097-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000797.

XX 09-MAY-2001; 2001WO-IB000797.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.  
 XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 XX WPI; 2001-502548/55.  
 DR P-PSDB; AAU07212.  
 XX

PT Novel purified polypeptide comprising fragment of mammalian aspartyl

PT protease 2, lacking Asp2 transmembrane domain and retaining beta

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

XX activity.

XX Example 9; Fig 7; 185pp; English.

XX The invention relates to a novel purified polypeptide comprising a

XX fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the

XX Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide

XX and the fragment retain the beta-secretase activity of the mammalian Asp2

XX protein. Also included is an isoform of amyloid protein precursor (APP)

XX comprising the amino acid sequence of a APP or its fragment containing an

XX APP cleavage site recognizable by a mammalian beta-secretase, and further

XX comprising two lysine residues at the carboxyl terminus of the amino acid

XX sequence of the mammalian APP or APP fragment. The polypeptides are used

XX for assaying for modulators of beta-secretase activity; identifying

XX agents that inhibit the APP processing activity of human Asp2 aspartyl

XX protease (Hu-Asp2); identifying agents that modulate the activity of Asp2

XX ; and for reducing cellular production of amyloid beta (Abeta) from APP.

XX Agents identified by the above methods are useful for treating

XX Alzheimer's disease; and for identifying modulators of amyloid-beta

XX (Abeta) peptide production, for use in designing therapeutics for the

XX treatment or prevention of Alzheimer's disease. Probes and primers

XX derived from Asp nucleic acid sequences are useful for detecting Hu-Asp

XX nucleic acids in in vitro assays and in Northern and Southern blots. The

XX present sequence represents the coding sequence of T7-caspase-human-Asp-

XX 2a delta TM construct which has a T7 tag, a caspase 8 leader sequence and

XX lacks the transmembrane domain. This construct was used for bacterial

XX expression and purification of human Asp2a. (Updated on 11-SEP-2003 to

XX standardise OS field)

XX Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11712 ..

Alignment segment 1/1: (+)	Quality:	Score:
Matching length: 20	104.00	35.9
Matching Percent Similarity: 100.00	Total length: 20	
Total Percent Identity: 100.00	Matching Percent Identity: 100.00	
Gaps: 0	Total Percent Identity: 100.00	

Alignment:

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22 ThrGlnHisGlyIleArgLeuProleuArgSerGlyLeuGlyValAlaPr 38
|||
82 ACCGACGACGGGATCCGGCTGCTGCGCACGGGCTGGGGGGGCGCC 131
|||
38 OleuGlyLeu 41
|||
132 CCTGGGGCTG 141

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Sequence name: rmp2ndb:AAS11716

Sequence documentation:

ID AAS11716 standard; DNA; 1380 BP.

XX AAS11716;

XX 09-SEP-2004 (revised)

DT 24-OCT-2001 (first entry)

XX DNA encoding human aspartyl protease 2a deltaTM (His)6.

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XX Human; aspartyl protease 1; Asp-1; nootropic; neuroprotective;
KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;
KM beta-secretase; Alzheimer's disease; ds; Huhsp-2adeltaTM (His)6.
XX
XX Homo sapiens.
OS Unidentified.
XX
FH Key Location/Qualifiers
FT 1..1380
FT /tag= b
FT /product= "Human Aspartyl protease-2a delta TM (His)6"
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FT /transl_except= (pos:1363..1365, aa:His)
FT /transl_except= (pos:1366..1368, aa:His)
FT /transl_except= (pos:1369..1371, aa:His)
FT /transl_except= (pos:1372..1374, aa:His)
FT /transl_except= (pos:1375..1377, aa:His)
FT sig_peptide
FT /tag= a
FT /tag= 64..1377
FT /tag= C
FT /note= "Mature human aspartyl protease 2a deltaTM"
FT
FN WO200149097-A2.
XX
PD 12-JUL-2001.
XX
PF 09-MAY-2001; 2001WO-IB000797.
XX
PR 09-MAY-2001; 2001WO-IB000797.
XX
PA (BIEN/) BIENKOWSKI M J.
PA (GURN/) GURNEY M E.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
XX
XX Blenkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-502548/55.
XX P-PSDB; AAU07216.
XX
PT Novel purified polypeptide comprising fragment of mammalian aspartyl
PT protease 2, lacking Asp2 transmembrane domain and retaining beta
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT activity.
XX
PS Example 10; Page 162; 185pp; English.
XX
CC The invention relates to a novel purified polypeptide comprising a
CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
CC and the fragment retain the beta-secretase activity of the mammalian Asp2
CC protein. Also included is an isoform of amyloid protein precursor (APP)
CC comprising the amino acid sequence of a APP or its fragment containing an
CC APP cleavage site recognizable by a mammalian beta-secretase, and further
CC comprising two lysine residues at the carboxyl terminus of the amino acid
CC sequence of the mammalian APP or APP fragment. The polypeptides are used
CC for assaying for modulators of beta-secretase activity; identifying
CC agents that inhibit the APP processing activity of human Asp2 aspartyl
CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
CC agents identified by the above methods are useful for treating
CC Alzheimer's disease; and for identifying modulators of amyloid-beta
CC (Abeta) peptide production, for use in designing therapeutics for the
CC treatment or prevention of Alzheimer's disease. Probes and primers
CC derived from APP nucleic acid sequences are useful for detecting Hu-Asp
CC nucleic acids in in vitro assays and in Northern and Southern blots. The
CC present sequence represents the coding sequence of human Asp-2a delta TM
CC (His)6 construct which has a 6 histidine tag and lacks the transmembrane
CC domain. This construct was used for expression and purification of human
CC Asp2a in insect cells

```

```

CC
CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key
XX
XX Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAS11716 ..
XX
XX Alignment segment 1/1: (+)
XX
XX Matching length: 104.00
XX Matching Percent Similarity: 100.00
XX Total Percent Similarity: 100.00
XX Gaps: 0
XX
XX Alignment:
XX
XX 22 ThrGlnHisGlyIleArgLeuProLeuAArgSerGlyLeuGlyAlaPr 38
XX |||||
XX 64 ACCGACGACGGCATCCGCTGCCCTGCCGACGCGGCTGGGGGCGCC 113
XX |||||
XX 38 OLeuGlyLeu 41
XX |||||
XX 114 CTTGGGGCTG 123
XX
XX Sequence name: rnp2ndb:AAD17879
XX
XX Sequence documentation:
XX ID AAD17879 standard; cDNA; 1380 BP.
XX
XX AAD17879;
XX
XX 10-DEC-2001 (first entry)
XX
XX Human-Asp 2(a) lacking TM domain (His)6 protein encoding cDNA.
XX
XX Human; aspartyl protease 2a; Asp2a; amyloid precursor protein; APP;
XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
XX amyloid plaque; neuronal loss; proteolytic; nootropic; neuroprotective;
XX ss.
XX
XX Homo sapiens.
XX
XX Synthetic.
XX
XX Key Location/Qualifiers
XX CDS 1..1380
XX /tag= a
XX /product= "Human-Asp 2(a) lacking transmembrane domain
XX (His)6 protein"
XX /transl_except= (pos:640..642, aa:Gln)
XX /transl_except= (pos:1360..1362, aa:His)
XX /transl_except= (pos:1363..1365, aa:His)
XX /transl_except= (pos:1366..1368, aa:His)
XX /transl_except= (pos:1369..1371, aa:His)
XX /transl_except= (pos:1372..1374, aa:His)
XX /transl_except= (pos:1375..1377, aa:His)
XX
XX GB2357767-A.
XX
XX 04-JUL-2001.
XX
XX 22-SEP-2000; 2000GB-00023315.
XX
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155483P.
XX 23-SEP-1999; 99KO-US020881P.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Blenkowski MJ, Gurney M,
XX

```



DR WPI: 2001-444208/48.  
DR P-PSDB; AAE10643.  
XX  
XX Polypeptide comprising fragments of human aspartyl protease with amyloid  
PT precursor protein processing activity and alpha-secretase activity, for  
PT identifying modulators useful in treating Alzheimer's disease.  
XX  
PS Example 10; Page 132; 187pp; English.  
XX  
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1  
CC proteins which lack transmembrane domain or amino terminal domain or  
CC cytoplasmic domain and retains alpha-secretase activity and amyloid  
CC protein precursor (APP) processing activity. The proteins of the  
CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which  
CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase  
CC activity, where modulators that increase hu-Asp1 alpha-secretase activity  
CC are useful for treating Alzheimer's disease (AD) which causes progressive  
CC dementia with consequent formation of amyloid plaques, neurofibrillary  
CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful  
CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein  
CC with the substrate under acidic conditions and determining the level of  
CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding  
CC human Asp 2(a) lacking a transmembrane (TM) domain (his)6 protein which  
CC is generated from human Asp 2(a) protein by the deletion of its C-  
CC terminal TM domain and addition of hexa-histidine tag at its C-terminus  
XX  
SQ Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x AAD17875 ..  
Alignment segment 1/1: (+)  
Matching Quality: 104.00 EScore: 35.9  
Matching length: 20  
Match Similarity: 100.00  
Total length: 20  
Total Percent Identity: 100.00  
Total Percent Similarity: 100.00  
Gaps: 0  
Total Percent Identity: 100.00  
Alignment:  
22 ThrglnhsglylleargleuproleuargserglyleuglygialaPr 38  
64 ACCGAGCAGCGGCATCCGCTGCCCTGGCAGCGGCGCTGGGGGGGGCCCC 113  
38 olenglyleu 41  
114 CTTGGGGGCTG 123  
Sequence name: rngp2ndb: AAD17875  
Sequence documentation:  
ID AAD17875 standard; cDNA; 1380 BP.  
XX  
XX AAD17875;  
XX  
DT 10-DEC-2001 (first entry)  
XX  
XX T7-Caspase-human-pro-Asp 2(a) protein lacking TM domain encoding cDNA.  
DE  
XX  
XX Human; aspartyl protease 1; Asp1; amyloid precursor protein; APP;  
KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;  
KW amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;  
KW T7-Caspase-human-pro-Asp 2(a) protein; ss.  
XX  
XX Homo sapiens.  
OS Synthetic.  
OS  
XX  
XX Key Location/Qualifiers  
FT CDS 1..1380  
FT /tag= a  
FT /product= "T7-Caspase-human-pro-Asp 2(a) protein lacking  
FT transmembrane domain"  
XX

PN GB2357767-A.  
XX  
XX 04-JUL-2001.  
XX  
XX 22-SEP-2000; 2000GB-00023315.  
XX  
XX 23-SEP-1999; 99US-00404133.  
PR 23-SEP-1999; 99US-0155493P.  
PR 23-SEP-1999; 99MO-US020881.  
PR 13-OCT-1999; 99US-00416901.  
PR 06-DEC-1999; 99US-0169232P.  
XX  
PA (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
XX Bienkowski MJ, Gurney M;  
XX  
XX WPI: 2001-444208/48.  
DR P-PSDB; AAE10639.  
XX  
XX Polypeptide comprising fragments of human aspartyl protease with amyloid  
PT precursor protein processing activity and alpha-secretase activity, for  
PT identifying modulators useful in treating Alzheimer's disease.  
XX  
PS Example 9; Fig 7; 187pp; English.  
XX  
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1  
CC proteins which lack transmembrane domain or amino terminal domain or  
CC cytoplasmic domain and retains alpha-secretase activity and amyloid  
CC protein precursor (APP) processing activity. The proteins of the  
CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which  
CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase  
CC activity, where modulators that increase hu-Asp1 alpha-secretase activity  
CC are useful for treating Alzheimer's disease (AD) which causes progressive  
CC dementia with consequent formation of amyloid plaques, neurofibrillary  
CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful  
CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein  
CC with the substrate under acidic conditions and determining the level of  
CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding  
CC human T7-Caspase-human-pro-Asp 2(a) protein lacking a transmembrane (TM)  
CC domain. T7-Caspase-human-pro-Asp 2(a) protein is generated from human Asp  
CC 2(a) protein by the addition of a T7 tag and caspase 8 leader sequence at  
XX its N-terminal end and the deletion of its C-terminal TM domain  
XX  
SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x AAD17875 ..  
Alignment segment 1/1: (+)  
Matching Quality: 104.00 EScore: 35.9  
Matching length: 20  
Match Similarity: 100.00  
Total length: 20  
Total Percent Identity: 100.00  
Total Percent Similarity: 100.00  
Gaps: 0  
Total Percent Identity: 100.00  
Alignment:  
22 ThrglnhsglylleargleuproleuargserglyleuglygialaPr 38  
82 ACCGAGCAGCGGCATCCGCTGCCCTGGCAGCGGCGCTGGGGGGGGCCCC 131  
38 olenglyleu 41  
132 CTTGGGGGCTG 141  
Sequence name: rngp2ndb: AAD13035  
Sequence documentation:  
ID AAD13035 standard; cDNA; 1380 BP.  
XX  
XX AAD13035;  
XX  
DT 23-OCT-2001 (first entry)

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XX DE Human-Asp2(a) deltatm (His)6 protein cDNA.
XX KM Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
XX KM beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
XX KM neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
XX KM neuroprotective; antisense therapy; Asp2(a) deltatm (His)6 protein;
XX KM gene therapy; ss.
XX OS Homo sapiens.
XX SS Synthetic.
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XX FH CDS
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XX FT /transl_except= (pos:1360..1362, aa:His)
XX FT /transl_except= (pos:1363..1365, aa:His)
XX FT /transl_except= (pos:1366..1368, aa:His)
XX FT /transl_except= (pos:1369..1371, aa:His)
XX FT /transl_except= (pos:1372..1374, aa:His)
XX FT /transl_except= (pos:1375..1377, aa:His)
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XX FT /tag= d
XX FT /note= "Encodes N-terminal 1-21 amino acids of human
XX FT Asp2(a) deltatm (His)6 protein"
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XX FT 91..1377
XX FT mat_peptide
XX FT /tag= c
XX FT /product= "Mature human Asp2(a) deltatm (His)6 protein"
XX FT
XX PN W0200150829-A2.
XX PD 19-JUL-2001.
XX PF 09-MAY-2001; 2001WO-IB000799.
XX PR 09-MAY-2001; 2001WO-IB000799.
XX PA (BIEN/) BIENKOWSKI M J.
XX PA (GURN/) GURNEY M E.
XX PA (HEIN/) HEINRIKSON R L.
XX PA (PARO/) PARODI L A.
XX PA (YANR/) YAN R.
XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI: 2001-483072/52.
XX DR P-PSDB; AAE06873.
XX XX
XX PT Novel purified polypeptide comprising fragment of mammalian aspartyl
XX PT protease 2, lacking Asp2 transmembrane domain and retaining beta
XX PT secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX PT activity.
XX XX
XX PS Example 10; Page 162; 185pp; English.
XX XX
XX CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX CC precursor protein (APP) isoforms and their corresponding DNA molecules.
XX CC Human aspartyl proteases can act as beta-secretase proteases useful for
XX CC treating Alzheimer's disease. APP isoforms are useful for identifying
XX CC modulators of amyloid-beta peptide production, for use in designing
XX CC therapeutics for the treatment and prevention of Alzheimer's disease,
XX CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX CC and neuronal loss. APP isoforms are also used in methods for identifying
XX CC inhibitors and modulators of human Asp2 activity. The invention relates
XX CC to a method for identifying agents that modulate the activity of human
XX CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX CC as a means to screen in cellular assays for the inhibitors of beta- and
XX CC gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-

```

```

CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.
CC The present cDNA sequence encodes Human aspartyl protease 2a (Hu-Asp2a)
CC deltatm (His)6 protein which is obtained by the deletion of C-terminal
CC transmembrane domain and addition of a hexa-histidine tag at the C-
CC terminal end of Hu-Asp2a. Human Asp2a has beta-secretase activity
XX SQ Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;
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XX Alignment of: us-10-726-967a-1 x AAD13035 ..
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XX Alignment segment 1/1: (+)
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XX Matching Quality: 104.00
XX Matching length: 20
XX Matching Percent Similarity: 100.00
XX Total Percent Similarity: 100.00
XX Gaps: 0
XX Total Percent Identity: 100.00
XX
XX Alignment:
XX
XX 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaIlePr 38
XX 64 ACCGAGCAGCGGCGATCCGGCTGCCCTGCCGAGCGGCTGGGGGGCCCC 113
XX 38 OLeuGlyLeu
XX |||||
XX 114 CTTGGGGCTG
XX |||||
XX
XX Sequence name: trnp2ndb: AAD13031
XX
XX Sequence documentation:
XX ID AAD13031 standard; cDNA, 1380 BP.
XX
XX AC AAD13031;
XX
XX DT 23-OCT-2001 (first entry)
XX
XX DE T7-Caspase-Human-pro-Asp2(a) deltatm protein cDNA.
XX
XX KM Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
XX KM beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
XX KM neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
XX KM neuroprotective; antisense therapy; caspase-pro-Asp2(a) deltatm protein;
XX KM gene therapy; ss.
XX OS Homo sapiens.
XX SS Synthetic.
XX FH Key
XX FH CDS
XX FT 1.1380
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XX FT
XX PN W0200150829-A2.
XX PD 19-JUL-2001.
XX PF 09-MAY-2001; 2001WO-IB000799.
XX PR 09-MAY-2001; 2001WO-IB000799.
XX PA (BIEN/) BIENKOWSKI M J.
XX PA (GURN/) GURNEY M E.
XX PA (HEIN/) HEINRIKSON R L.
XX PA (PARO/) PARODI L A.
XX PA (YANR/) YAN R.
XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI: 2001-483072/52.
XX DR P-PSDB; AAE06869.
XX PT Novel purified polypeptide comprising fragment of mammalian aspartyl

```

PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
XX activity.  
XX  
XX Example 9; Fig 7; 185pp; English.  
XX  
CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid  
CC precursor protein (APP) isoforms and their corresponding DNA molecules.  
CC Human aspartyl proteases can act as beta-secretase proteases useful for  
CC treating Alzheimer's disease. APP isoforms are useful for identifying  
CC modulators of amyloid-beta peptide production, for use in designing  
CC therapeutics for the treatment and prevention of Alzheimer's disease,  
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis  
CC and neuronal loss. APP isoforms are also used in methods for identifying  
CC inhibitors and modulators of human Asp2 activity. The invention relates  
CC to a method for identifying agents that modulate the activity of human  
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
CC as a means to screen in cellular assays for the inhibitors of beta- and  
CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in  
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.  
CC The present cDNA sequence encodes T7-Caspase-Human-pro-aspartyl protease  
CC 2a (Asp2a) deltatm protein which is obtained by the addition of T7 tag  
CC and caspase 8 leader sequence at the N-terminal end and deletion of  
CC transmembrane domain at the C-terminal end of Hu-Asp2a. Human Asp2a has  
CC beta-secretase activity  
XX  
SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x AAD13031 ..  
Alignment segment 1/1: (+)  
Matching Length: 104.00 Score: 35.9  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0  
Alignment:  
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAPr 38  
82 ACCCGACACGGCATCGGCTGCCCTGCGCACGGCGCTGGGGGGCCCC 131  
38 OLeuGlyLeu 41  
132 CCTGGGGCTG 141  
Sequence name: rmp2ndb: AAD06749  
Sequence documentation:  
ID AAD06749 standard; cDNA; 1380 BP.  
XX  
XX AAD06749;  
AC  
XX  
DT 10-AUG-2001 (first entry)  
XX  
XX T7-Caspase-human-pro-Asp-2(a) delta TM protein cDNA.  
XX  
XX Human: alpha-secretase; amyloid precursor protein; APP; therapy;  
KM Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a;  
KM beta-secretase; caspase-Asp-2a delta TM; ss.  
XX  
XX Homo sapiens.  
OS Synthetic.  
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XX  
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XX

PN W0200123533-A2.  
XX  
XX 05-APR-2001.  
PD  
XX  
XX 22-SEP-2000; 2000MO-US026080.  
XX  
XX 23-SEP-1999; 99US-0155493P.  
PR 23-SEP-1999; 99MO-US020881.  
PR 13-OCT-1999; 99US-00416901.  
PR 06-DEC-1999; 99US-0169232P.  
XX  
XX (PHAA) PHARMACIA & UPJOHN CO.  
XX  
XX Gurney M, Bienkowski MJ;  
PI WPI; 2001-290516/30.  
XX  
DR P-PSDB; AAE02591.  
XX  
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor  
PT protein, useful for the treatment of Alzheimer's disease.  
XX  
XX Example 9; Fig 7; 189pp; English.  
XX  
PS The present invention relates to enzymes for cleaving the alpha-  
XX secretase site of the amyloid precursor protein (APP) and methods of  
XX identifying those enzymes. The methods may be used to identify enzymes  
XX that may be used to cleave the alpha-secretase cleavage site of the APP  
XX protein. The enzymes may be used to treat or modulate the progress of  
XX Alzheimer's disease. The present sequence is a cDNA encoding human  
XX aspartyl protease 2a (Asp 2a) caspase deltatm protein which is obtained  
CC by deleting the transmembrane domain and adding a T7-caspase leader  
CC sequence at the N-terminal end. This sequence has beta-secretase protease  
CC activity  
XX  
SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x AAD06749 ..  
Alignment segment 1/1: (+)  
Matching Length: 104.00 Score: 35.9  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0  
Alignment:  
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAPr 38  
82 ACCCGACACGGCATCGGCTGCCCTGCGCACGGCGCTGGGGGGCCCC 131  
38 OLeuGlyLeu 41  
132 CCTGGGGCTG 141  
Sequence name: rmp2ndb: AAD06753  
Sequence documentation:  
ID AAD06753 standard; cDNA; 1380 BP.  
XX  
XX AAD06753;  
AC  
XX  
DT 10-AUG-2001 (first entry)  
XX  
XX Human-Asp-2(a) deltatm (His) 6 protein cDNA.  
XX  
XX Human: alpha-secretase; amyloid precursor protein; APP; therapy;  
KM Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a;  
KM beta-secretase; Asp-2a deltatm; histidine tag; mutant; ss.  
XX  
XX Homo sapiens.  
OS Synthetic.  
XX



CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and  
CC Southern blots. The present sequence encodes Human-pro- Asp 2(a) delta TM  
CC protein, which lacks the C-terminal transmembrane domain and has a His  
CC tag to aid purification  
XX  
SQ Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11531 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProleuArgSerGlyLeuGlyValAPr 38
|||||
64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCGGCGGCCCC 113
|||||
38 OLeuGlyLeu 41
|||||
114 CTTGGGCGCTG 123
```

Sequence name: rmp2ndb:AAS11527

Sequence documentation:

ID AAS11527 standard; cDNA; 1380 BP.

AC AAS11527;

XX 24-OCT-2001 (first entry)

DE Human T7-Caspase-Human-pro-Asp 2(a) delta TM fusion protein cDNA.

XX Human; Aspartyl protease; beta-secretase; nootropic; ASP2;

KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

XX amyloid-beta; Abeta; T7-Caspase-Human-pro-Asp 2(a) delta TM; ss.

OS Homo sapiens.

OS Synthetic.

FT Key Location/Qualifiers

FT CDS 1..1380

FT sig\_peptide /product= "T7-Caspase-Human-pro-Asp 2(a) delta TM fusion protein"

FT mat\_peptide /note= "Caspase leader sequence"

FT WO200149098-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001MO-IB000798.

XX 09-MAY-2001; 2001MO-IB000798.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANK/) YAN R.

XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-502549/55.

DR P-PSDB; AAU06613.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

PT protease 2, lacking Asp2 transmembrane domain and retaining beta

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

XX activity.

PS Example 9; Fig 7; 185pp; English.

XX The invention relates to a purified polypeptide comprising a fragment of

CC mammalian aspartyl protease (Asp)2 protein which lacks the Asp2

CC transmembrane domain and the Asp2 protein, and where the polypeptide and

CC the fragment retain the beta-secretase activity of the mammalian Asp2

CC protein. The invention also details polynucleotides for the Asp proteins

CC and vectors expressing them, and a polypeptide (isoform of amyloid

CC protein precursor (APP) comprising the amino acid sequence of an APP or

CC its fragment containing an APP cleavage site recognizable by a mammalian

CC beta-secretase, and further comprising two lysine residues at the

CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP

CC fragment. Also included in the invention are methods of identifying

CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are

CC useful for treating Alzheimer's disease. APP is useful in methods for

CC identifying inhibitors or modulators of human Asp2 activity and amyloid-

CC beta (Abeta) peptide production. APP is also useful in designing

CC therapeutic for the treatment or prevention of Alzheimer's disease. APP

CC comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is

CC associated with increased levels of Abeta processing is useful in assays

CC relating the Alzheimer's research. The expression vector is useful for

CC recombinantly expressing APP. Nucleic acids that hybridize to Asp

CC oligonucleotides are useful as probes or primers. The probes are useful

CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and

CC Southern blots. The present sequence encodes T7-caspase- Human-pro-Asp

CC 2(a) delta TM fusion protein which has a N-terminal T7 tag to aid

XX purification when expressed in E. coli and a Caspase leader sequence

XX

SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11527 ..

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProleuArgSerGlyLeuGlyValAPr 38
|||||
82 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGGCGGCGGCCCC 131
|||||
38 OLeuGlyLeu 41
|||||
132 CTTGGGCGCTG 141
```

Sequence name: rmp2ndb:ABL52471

Sequence documentation:

ID ABL52471 standard; cDNA; 1380 BP.

XX ABL52471;

XX 16-JUL-2002 (first entry)

DE Human Asp-2(a)deltaTM(His)6 nucleotide sequence SEQ ID NO:31.

XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;

XX Chromosome 11q23.3-24.1; gene; ss.

XX Homo sapiens.

OS

XX

```

FH Key Location/Qualifiers
FT CDS 1..1380
FT /tag= a
FT /product= "Human Asp-2(a)deltaTM(His)6"
FT /transl_except= (pos:640..642,aa:Gln)
FT /transl_except= (pos:1360..1362,aa:His)
FT /transl_except= (pos:1363..1365,aa:His)
FT /transl_except= (pos:1366..1368,aa:His)
FT /transl_except= (pos:1369..1371,aa:His)
FT /transl_except= (pos:1372..1374,aa:His)
FT /transl_except= (pos:1375..1377,aa:His)

```

GB2367060-A.

27-MAR-2002.

29-OCT-2001; 2001GB-00025934.

23-SEP-1999; 99US-00404133.

23-SEP-1999; 99US-0155493P.

23-SEP-1999; 99WO-US020881.

13-OCT-1999; 99US-00416901.

06-DEC-1999; 99US-0169232P.

22-SEP-2000; 2000GB-00023315.

(PHMA ) PHARMACIA &amp; UPJOHN CO.

Blenkowskaki MJ, Gurney M;

WPI; 2002-397167/43.

P-PSDB; ABB78604.

Human aspartyl protease 1 substrates useful in assays to detect aspartyl protease activity, e.g. for the diagnosis of Alzheimer's disease.

Example 10; Page 132; 182pp; English.

The present invention describes a human aspartyl protease 1 (hu-Asp1) substrate (I) which comprises a peptide of no more than 50 amino acids, and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1 proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with (i) under acidic conditions; and (b) determining the level of hu-Asp1 proteolytic activity; (2) a purified polynucleotide (III) comprising a nucleotide sequence that hybridises under stringent conditions to the non-coding strand complementary to a defined 1804 nucleotide sequence (see ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1 domain; (3) a purified polynucleotide (III') comprising a sequence that encodes a polypeptide further lacking a pro-peptide domain corresponding to amino acids 23-62 of hu-Asp1 (see ABB78589); (4) a vector (IV) comprising (III) or (III') and (5) a host cell (V) transformed or transfected with (III), (III'), and/or (IV). The hu-Asp1 protease or substrate (I) may be used as an enzyme substrate in assays to detect aspartyl protease activity, (II) and therefore diagnose diseases associated with aberrant hu-Asp1 expression and activity such as Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present sequence encodes human Asp-2(a)deltaTM(His)6, which is given in an example from the present invention

Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: ua-10-726-967a-1 x ABL52471 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Score:	35.9
Matching Percent Similarity:	100.00	Total Length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

Alignment:

```

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaApr 38
64 ACCGACGACGGCCTCCGCTCCCTGCGACGCGCCCTGCGGCGGCC 113
38 oLeuGlyLeu 41
114 CCGCGGCGCTG 123

```

Sequence name: rngp2ndb:ABL52467

Sequence documentation:  
ID ABL52467 standard; cDNA; 1380 BP.

ABL52467;

16-JUL-2002 (first entry)

DE T7-caspase-human-pro-Asp-2(a)deltaTM nucleotide sequence SEQ ID NO:23.

KW Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic; amyloid precursor protein; APP; gene; ss.

OS Homo sapiens.

```

FH Key Location/Qualifiers
FT CDS 1..1380
FT /tag= a
FT /product= "T7-caspase-human-pro-Asp-2(a)deltaTM"

```

GB2367060-A.

27-MAR-2002.

29-OCT-2001; 2001GB-00025934.

23-SEP-1999; 99US-00404133.

23-SEP-1999; 99US-0155493P.

23-SEP-1999; 99WO-US020881.

13-OCT-1999; 99US-00416901.

06-DEC-1999; 99US-0169232P.

22-SEP-2000; 2000GB-00023315.

(PHMA ) PHARMACIA &amp; UPJOHN CO.

Blenkowskaki MJ, Gurney M;

WPI; 2002-397167/43.

P-PSDB; ABB78600.

Human aspartyl protease 1 substrates useful in assays to detect aspartyl protease activity, e.g. for the diagnosis of Alzheimer's disease.

Example 9; Fig 7; 182pp; English.

The present invention describes a human aspartyl protease 1 (hu-Asp1) substrate (I) which comprises a peptide of no more than 50 amino acids, and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1 proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with (i) under acidic conditions; and (b) determining the level of hu-Asp1 proteolytic activity; (2) a purified polynucleotide (III) comprising a nucleotide sequence that hybridises under stringent conditions to the non-coding strand complementary to a defined 1804 nucleotide sequence (see ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1 domain; (3) a purified polynucleotide (III') comprising a sequence that encodes a polypeptide further lacking a pro-peptide domain corresponding to amino acids 23-62 of hu-Asp1 (see ABB78589); (4) a vector (IV) comprising (III) or (III') and (5) a host cell (V) transformed or

CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease  
 CC substrate (I) may be used as an enzyme substrate in assays to detect  
 CC aspartyl protease activity, (II) and therefore diagnose diseases  
 CC associated with aberrant hu-Asp1 expression and activity such as  
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
 CC sequence encodes human T7-caespase-human-pro-Asp-2(a)delatm, which is  
 CC given in an example from the present invention

XX Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL52467 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAPR 38
|||
82 ACCCAGCAGCGGATCCGGCTGCCCTGGCGCAGCGGCGGGGGGGCCCC 131
|||
38 OleuGlyLeu
|||
132 CCTGGGGGCTG
|||
141

```

Sequence name: rngp2ndb:ADJ94343

Sequence documentation:

ID ADJ94343 standard; cDNA; 1380 BP.

XX AC ADJ94343;

XX DT 03-JUN-2004 (first entry)

XX DE Human-pro-Asp-2(a)delat(His)6 cDNA.

XX KM Human; aa; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

XX KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

XX KM nototropic; neuroprotective; amyloid beta; mutant.

XX OS Homo sapiens.

XX OS Synthetic.

XX PN US6706485-B1.

XX PD 16-MAR-2004.

XX PF 12-APR-2000; 2000US-00548376.

XX PR 24-SEP-1998; 98US-0101594P.

XX PR 23-SEP-1999; 99US-00404133.

XX PR 23-SEP-1999; 99US-0155493P.

XX PR 23-SEP-1999; 99WO-US020881.

XX PR 13-OCT-1999; 99US-00416901.

XX PA (PHAA) PHARMACIA & UPJOHN CO.

XX PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R,

XX DR WPI; 2004-236722/22.

XX DR P-PSDB; ADJ94344.

XX PT Identifying agents that modulate activity of Asp2 aspartyl protease

XX PT useful for treating or preventing Alzheimer's disease involves comparing

XX PT APP processing activity of protease in presence and absence of test

XX PT agent.

PS Example 10; SEQ ID NO 31; 1099p; English.

XX The invention relates to identifying agents that modulate activity of  
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 CC precursor protein (APP) in the presence and absence of a test agent,  
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated  
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy terminal amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW  
 CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the activity  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease. Preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease  
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a  
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2  
 CC proteins.

XX Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94343 ..

Alignment segment 1/1: (+)

Quality:	104.00	Escore:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Gaps: 0

Alignment:

```

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAPR 38
|||
64 ACCCAGCAGCGGATCCGGCTGCCCTGGCGCAGCGGCGGGGGGGCCCC 113
|||
38 OleuGlyLeu
|||
114 CCTGGGGGCTG
|||
123

```

Sequence name: rngp2ndb:ADJ94335

Sequence documentation:

ID ADJ94335 standard; cDNA; 1380 BP.

XX AC ADJ94335;

XX DT 03-JUN-2004 (first entry)

XX DE Human T7-Caspase-human-pro-Asp-2(a)delatm cDNA.

XX KM Human; aa; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

XX KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

XX KM nototropic; neuroprotective; amyloid beta; mutant.

XX OS Homo sapiens.

XX OS Synthetic.

XX PN US6706485-B1.



XX 16-MAR-2004.  
 PD |||||  
 XX |||||  
 PF 12-APR-2000; 2000US-00548376.  
 XX  
 PR 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99WO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 PA (PHMA ) PHARMACIA & UPJOHN CO.  
 PI Gurney ME, Bienkowiak MJ, Heinrichson RL, Parodi LA, Yan R;  
 XX  
 DR MPI; 2004-236722/22.  
 XX P-PSDB; AD050431.  
 XX  
 PT Identifying agents that modulate activity of Asp2 aspartyl protease  
 PT useful for treating or preventing Alzheimer's disease involves comparing  
 PT APP processing activity of protease in presence and absence of test  
 PT agent.  
 XX  
 PS Example 9; SEQ ID NO 23; 109bp; English.  
 XX  
 CC The invention relates to identifying agents that modulate activity of  
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 CC precursor protein (APP) in the presence and absence of a test agent,  
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated  
 CC antibody that specifically binds to Hu-Asp polypeptide, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy terminal amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW  
 CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the activity  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease. Preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease  
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a  
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2  
 CC proteins.  
 XX  
 SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x AD050431 ..  
 Alignment segment 1/1: (+)  
 Quality: 104.00 Score: 35.9  
 Matching length: 20  
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
 Gaps: 0  
 Alignment:  
 22 ThGlnHtAgLyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
 82 ACCAGACGCGCATCCGGCTCCCTGCGAGCGCCCTGGGGGGCGCC 131

38 0LeuGlyLeu 41  
 |||||  
 132 CCTGGGGCGCTG 141  
 Sequence name: rngp2nrb:AD050431  
 Sequence documentation:  
 ID AD050431 standard; DNA; 1380 BP.  
 XX  
 AC AD050431;  
 XX  
 DT 29-JUL-2004 (first entry)  
 XX  
 DE T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric DNA.  
 XX  
 KW Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;  
 XX Alzheimer's disease; gene therapy; caspase; human; gene; chimeric; ds.  
 OS Homo sapiens.  
 OS Chimeric.  
 OS Unidentified.  
 XX  
 FH Key Location/Qualifiers  
 FT CDS 1..1380  
 FT /tag= a  
 FT /product= "T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric  
 FT protein"  
 XX  
 PN US6737510-B1.  
 XX  
 PD 18-MAY-2004.  
 XX  
 PF 12-APR-2000; 2000US-00548373.  
 XX  
 PR 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99WO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 XX  
 PA (PHMA ) PHARMACIA & UPJOHN CO.  
 XX  
 PI Gurney ME, Bienkowiak MJ, Heinrichson RL, Parodi LA, Yan R;  
 XX  
 DR MPI; 2004-387112/36.  
 XX  
 DR P-PSDB; AD050432.  
 XX  
 PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG  
 PT involved in processing amyloid precursor protein into amyloid beta,  
 PT useful in preparing a composition for treating or preventing Alzheimer's  
 PT disease.  
 XX  
 PS Example 9; SEQ ID NO 23; 108bp; English.  
 XX  
 CC The invention relates to a method for identifying an agent that decreases  
 CC the protease activity of the aspartyl protease (Asp) polypeptide. It also  
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
 CC cleavage site of the amyloid precursor protein (APP). The invention is  
 CC useful in preparing a composition for treating or preventing Alzheimer's  
 CC disease. It is also useful in gene therapy. The present sequence is T7-  
 CC Caspase-Human-pro-Asp-2(a)deltaTM chimeric DNA. This sequence is used to  
 CC illustrate the method of the invention.  
 XX  
 SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x AD050431 ..  
 Alignment segment 1/1: (+)  
 Quality: 104.00 Score: 35.9  
 Matching length: 20  
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00



Gaps: 0

Alignment:

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22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
82 ACCGACGACGCGATCCGCGCTGCGCGACGCGCTGGGGGGGCGCC 131
38 oLeuGlyLeu 41
132 CCGGGGCGCTG 141

```

Sequence name: rngp2ndb:AD050439

Sequence documentation:

ID AD050439 standard; DNA; 1380 BP.

AC AD050439;

DT 29-JUL-2004 (first entry)

DE Human Asp-2(a)deltaTM(His)6 DNA.

XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;

KM Alzheimer's disease; gene therapy; human; gene; ds.

OS Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1380

FT /tag= a

FT /product= "Human Asp-2(a)deltaTM(His)6 protein"

FT /transl\_except= (pos:640..642, aa:Gln)

FT /transl\_except= (pos:1360..1362, aa:His)

FT /transl\_except= (pos:1363..1365, aa:His)

FT /transl\_except= (pos:1366..1368, aa:His)

FT /transl\_except= (pos:1369..1371, aa:His)

FT /transl\_except= (pos:1372..1374, aa:His)

FT /transl\_except= (pos:1375..1377, aa:His)

PN US6737510-B1.

XX 18-MAY-2004.

PD 12-APR-2000; 2000US-00548373.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99MO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA ) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

PI WPI, 2004-387112/36.

DR P-PSDB; AD050440.

XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG

PT involved in processing amyloid precursor protein into amyloid beta,

PT useful in preparing a composition for treating or preventing Alzheimer's

PT disease.

XX Example 10; SEQ ID NO 31; 108bp; English.

XX The invention relates to a method for identifying an agent that decreases

CC the protease activity of the aspartyl protease (asp) polypeptide. It also

CC provides enzyme and enzymatic procedures for cleaving the beta secretase

CC cleavage site of the amyloid precursor protein (APP). The invention is

CC useful in preparing a composition for treating or preventing Alzheimer's

CC disease. It is also useful in gene therapy. The present sequence is human

CC Asp-2(a)deltaTM(His)6 DNA. This sequence is used to illustrate the method

XX of the invention.

XX Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050439 ..

Alignment segment 1/1: (+)

	Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20	
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00	
Total Percent Similarity:	100.00	Total Percent Identity:	100.00	
Gaps:	0			

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGCGATCCGCGCTGCGCGACGCGCTGGGGGGGCGCC 113
38 oLeuGlyLeu 41
114 CCGGGGCGCTG 123

```

Sequence name: rngp2ndb:ADR75344

Sequence documentation:

ID ADR75344 standard; DNA; 1380 BP.

AC ADR75344;

DT 18-NOV-2004 (first entry)

DE T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric DNA.

XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;

KM chromosome identification; Alzheimer's disease; human; caspase; chimeric;

KM gene; ds.

XX Homo sapiens.

OS Chimeric.

OS Unidentified.

XX Key Location/Qualifiers

FT CDS 1..1380

FT /tag= a

FT /product= "T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric

protein"

FT US2004166507-A1.

XX 26-AUG-2004.

PD 29-AUG-2003; 2003US-00652045.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (GURN/) GURNEY M E.

PA (BIEN/) BIENKOWSKI M J.

PA (HEIN/) HEINRICHSON R L.

PA (PARO/) PARODI L A.

PA (YANR/) YAN R.

XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

PI WPI, 2004-624916/60.

DR P-PSDB; ADR75345.

XX Novel purified/isolated polynucleotide encoding polypeptide having



DE DNA sequence for BACE N-Q R57KDEL.  
XX  
XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;  
KW Alzheimer's disease; ds.  
XX  
XX Synthetic.  
OS  
FH Key Location/Qualifiers  
FT CDS 1..1383  
FT /\*tag= a  
FT /product= "BACE protein"  
XX  
XX WO2004011641-A2.  
XX  
XX 05-FEB-2004.  
XX  
XX 25-JUL-2003; 2003WO-GB003200.  
XX  
XX 26-JUL-2002; 2002US-0398681P.  
XX  
XX (ASTE-) ASTEX TECHNOLOGY LTD.  
XX  
XX Villard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;  
XX P-PSDB; ADJ57789.  
XX  
XX WPI: 2004-169242/16.  
XX  
XX P-PSDB; ADJ57789.  
XX  
XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's  
PT syndrome.  
XX  
XX  
XX Disclosure; SEQ ID NO 17; 145pp; English.  
XX  
XX  
XX The present invention relates to a beta site APP cleaving enzyme (BACE)  
CC protein. The compound or the composition is useful in medicine and the  
CC BACE crystal structure is useful for drug discovery. The BACE protein,  
CC compounds, pharmaceutical compositions, medicament, drug or other  
CC composition comprising the compound is useful for treating or preventing  
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The  
CC present sequence represents the DNA sequence for a BACE encoding  
CC sequence.  
XX  
XX  
XX Sequence 1383 BP; 294 A; 401 C; 402 G; 286 T; 0 U; 0 Other;  
SQ  
Alignment of: us-10-726-967a-1 x ADJ57788 ..  
Alignment segment 1/1: (+)  
Matching length: 104.00  
Total length: 35.9  
Matching Percent Similarity: 100.00  
Total Percent Identity: 100.00  
Total Percent Similarity: 100.00  
Gaps: 0  
Alignment:  
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||  
70 ACCCGACAGCGGATCCGGCTGCCCTGGCAGCGGCGGCGGCC 119  
|||  
38 oLeuGlyLeu 41  
|||  
120 CCTGGGGCTG 129  
Sequence name: rngp2ndb:ADJ57774  
Sequence documentation:  
ID ADJ57774 standard; DNA; 1386 BP.  
XX  
XX ADJ57774;  
AC  
XX  
XX 06-MAY-2004 (first entry)  
XX

DE DNA sequence for BACE N-Q.  
XX  
XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;  
KW Alzheimer's disease; ds.  
XX  
XX Synthetic.  
OS  
FH Key Location/Qualifiers  
FT CDS 1..1386  
FT /\*tag= a  
FT /product= "BACE protein"  
XX  
XX WO2004011641-A2.  
XX  
XX 05-FEB-2004.  
XX  
XX 25-JUL-2003; 2003WO-GB003200.  
XX  
XX 26-JUL-2002; 2002US-0398681P.  
XX  
XX (ASTE-) ASTEX TECHNOLOGY LTD.  
XX  
XX Villard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;  
XX P-PSDB; ADJ57775.  
XX  
XX WPI: 2004-169242/16.  
XX  
XX P-PSDB; ADJ57775.  
XX  
XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's  
PT syndrome.  
XX  
XX  
XX Disclosure; SEQ ID NO 3; 145pp; English.  
XX  
XX  
XX The present invention relates to a beta site APP cleaving enzyme (BACE)  
CC protein. The compound or the composition is useful in medicine and the  
CC BACE crystal structure is useful for drug discovery. The BACE protein,  
CC compounds, pharmaceutical compositions, medicament, drug or other  
CC composition comprising the compound is useful for treating or preventing  
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The  
CC present sequence represents the DNA sequence for a BACE encoding  
CC sequence.  
XX  
XX  
XX Sequence 1386 BP; 294 A; 402 C; 404 G; 286 T; 0 U; 0 Other;  
SQ  
Alignment of: us-10-726-967a-1 x ADJ57774 ..  
Alignment segment 1/1: (+)  
Matching length: 104.00  
Total length: 35.9  
Matching Percent Similarity: 100.00  
Total Percent Identity: 100.00  
Total Percent Similarity: 100.00  
Gaps: 0  
Alignment:  
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||  
70 ACCCGACAGCGGATCCGGCTGCCCTGGCAGCGGCGGCGGCC 119  
|||  
38 oLeuGlyLeu 41  
|||  
120 CCTGGGGCTG 129  
Sequence name: rngp2ndb:ADJ57782  
Sequence documentation:  
ID ADJ57782 standard; DNA; 1386 BP.  
XX  
XX ADJ57782;  
AC  
XX  
XX 06-MAY-2004 (first entry)  
XX

DE DNA sequence for BACE N-Q R56KR57K.  
XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;  
KW Alzheimer's disease; ds.  
XX  
XX  
OS Synthetic.  
XX  
XX  
FH Key Location/Qualifiers  
FT CDS 1..1386  
FT /tag= a  
FT /product= "BACE protein"  
XX  
XX WO2004011641-A2.  
XX  
XX PD 05-FEB-2004.  
XX  
XX PF 25-JUL-2003; 2003WO-GB003200.  
XX  
XX PR 26-JUL-2002; 2002US-0398681P.  
XX  
XX PA (ASTE-) ASTEX TECHNOLOGY LTD.  
XX  
XX PI Vulliamd LMM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;  
XX  
XX DR WPI; 2004-169242/16.  
XX  
XX DR P-PSDB; ADJ57783.  
XX  
XX PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
XX  
XX PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's  
XX  
XX PT syndrome.  
XX  
XX PS Disclosure; SEQ ID NO 11; 145pp; English.  
XX  
XX CC The present invention relates to a beta site APP cleaving enzyme (BACE)  
XX  
XX CC protein. The compound or the composition is useful in medicine and the  
XX  
XX CC BACE crystal structure is useful for drug discovery. The BACE protein,  
XX  
XX CC compounds, pharmaceutical compositions, medicament, drug or other  
XX  
XX CC composition comprising the compound is useful for treating or preventing  
XX  
XX CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The  
XX  
XX CC present sequence represents the DNA sequence for a BACE encoding  
XX  
XX CC sequence.  
XX  
SQ Sequence 1386 BP; 297 A; 401 C; 402 G; 286 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x ADJ57782 ..  
Alignment segment 1/1: (+)  
Matching Quality: 104.00  
Total length: 35.9  
Matching Percent Similarity: 100.00  
Total Percent Identity: 100.00  
Total Percent Similarity: 100.00  
Total Percent Identity: 100.00  
Gaps: 0  
Alignment:  
22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||  
70 ACCCAGCAGCGGATCGGCTGCCCTGCAGCGGCGCTGGGGGGCCCC 119  
|||  
38 oLeuGlyLeu 41  
|||  
120 CCGGGGGCTG 129  
Sequence name: rngp2ndb:ADJ57786  
Sequence documentation:  
ID ADJ57786 standard; DNA; 1386 BP.  
XX  
XX AC ADJ57786;  
XX  
XX DT 06-MAY-2004 (first entry)  
XX

DE DNA sequence for BACE N-Q R57K.  
XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;  
KW Alzheimer's disease; ds.  
XX  
XX  
OS Synthetic.  
XX  
XX  
FH Key Location/Qualifiers  
FT CDS 1..1386  
FT /tag= a  
FT /product= "BACE protein"  
XX  
XX WO2004011641-A2.  
XX  
XX PD 05-FEB-2004.  
XX  
XX PF 25-JUL-2003; 2003WO-GB003200.  
XX  
XX PR 26-JUL-2002; 2002US-0398681P.  
XX  
XX PA (ASTE-) ASTEX TECHNOLOGY LTD.  
XX  
XX PI Vulliamd LMM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;  
XX  
XX DR WPI; 2004-169242/16.  
XX  
XX DR P-PSDB; ADJ57787.  
XX  
XX PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
XX  
XX PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's  
XX  
XX PT syndrome.  
XX  
XX PS Disclosure; SEQ ID NO 15; 145pp; English.  
XX  
XX CC The present invention relates to a beta site APP cleaving enzyme (BACE)  
XX  
XX CC protein. The compound or the composition is useful in medicine and the  
XX  
XX CC BACE crystal structure is useful for drug discovery. The BACE protein,  
XX  
XX CC compounds, pharmaceutical compositions, medicament, drug or other  
XX  
XX CC composition comprising the compound is useful for treating or preventing  
XX  
XX CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The  
XX  
XX CC present sequence represents the DNA sequence for a BACE encoding  
XX  
XX CC sequence.  
XX  
SQ Sequence 1386 BP; 295 A; 402 C; 403 G; 286 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x ADJ57786 ..  
Alignment segment 1/1: (+)  
Matching Quality: 104.00  
Total length: 35.9  
Matching Percent Similarity: 100.00  
Total Percent Identity: 100.00  
Total Percent Similarity: 100.00  
Total Percent Identity: 100.00  
Gaps: 0  
Alignment:  
22 ThrGlnHsGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||  
70 ACCCAGCAGCGGATCGGCTGCCCTGCAGCGGCGCTGGGGGGCCCC 119  
|||  
38 oLeuGlyLeu 41  
|||  
120 CCGGGGGCTG 129  
Sequence name: rngp2ndb:ADJ72736  
Sequence documentation:  
ID ADJ72736 standard; DNA; 1470 BP.  
XX  
XX AC ADJ72736;  
XX  
XX DT 18-DEC-2003 (first entry)  
XX

DE Human beta-site aspartyl protease cleaving enzyme catalytic domain gene.  
XX  
XX de; gene; neuroprotective; nontropic; crystalline;  
XX Beta-site APP cleaving enzyme; BACE; aspartyl protease;  
XX Alzheimer's disease; protein co-ordinate data.  
XX  
XX Homo sapiens.  
XX  
XX  
XX Key Location/Qualifiers  
XX CDS 1..1470  
XX /\*tag= a  
XX  
XX WO2003012089-A2.  
XX  
XX PD 13-FEB-2003.  
XX  
XX 26-JUL-2002; 2002WO-GB003461.  
XX  
XX 26-JUL-2001; 2001US-0308366P.  
XX  
XX (ASTE-) ASTEX TECHNOLOGY LTD.  
XX (JANC ) JANSSEN PHARM NV.  
XX  
XX PI Von J, Cleasby A, Bruinzeel WD, Masure SLJ, Tickle I, Sharff A,  
XX WPI; 2003-239524/23.  
XX DR P-PSDB; ADC72735.  
XX  
XX PT New Beta-site APP cleaving enzyme (BACE) proteins and protein crystal,  
XX useful in designing compounds that inhibit or modulate BACE, in drug  
XX screening assays, and in identifying receptors.  
XX  
XX PS Disclosure; Fig 2B; 272pp; English.  
XX  
XX CC The invention relates to a new crystalline form of Beta-site APP cleaving  
XX enzyme (BACE) or its functional portion having an active site containing  
XX one or more ligands other than the natural substrate or the substrate  
XX that occurs naturally or physiologically within the active site.  
XX Inhibitors of BACE protein or its functional portion is useful for  
XX preparing a composition or medicament for inhibiting BACE or the  
XX production of A-beta or its fragments, and in therapy for treating  
XX Alzheimer's disease. The BACE crystals and proteins may be used to design  
XX compounds that inhibit or modulate BACE, in drug screening assays, and in  
XX identifying receptors. This sequence represents the coding sequence for  
XX the BACE protein. The corresponding protein given in the specification  
XX represents the BACE protein from amino acid 76 of the full length  
XX protein.  
XX  
XX SQ Sequence 1470 BP; 352 A; 399 C; 396 G; 323 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x ADC72736 ..  
Alignment segment 1/1: (+)  
Matching Length: 104.00  
Matching Percent: 100.00  
Total Similarity: 100.00  
Total Percent Identity: 100.00  
Gaps: 0  
Bscore: 35.9  
Total length: 20  
Total Identity: 100.00  
Alignment:  
22 ThrGlnHisGlyIleArgLeuProLeuAArgSerGlyLeuGlyValAlaPr 38  
154 ACCGACGACGGGATCCGGCTGCTGCGACGCGCTGGGAGAGACTCC 203  
38 GLeuGlyLeu 41  
204 ACTGGGACTG 213  
Sequence name: rngp2ndb:AAA28278  
Sequence documentation:

ID AAA28278 standard; cDNA; 1503 BP.  
XX  
XX AC AAA28278;  
XX  
XX DT 12-FEB-2001 (first entry)  
XX  
XX DE Human cDNA encoding beta-secretase.  
XX  
XX KM Beta-secretase; enzyme; amyloid plaque; Alzheimer's disease; human;  
XX Down's syndrome; amyloid angiopathy; gene therapy; neuroprotective; ss.  
XX  
XX OS Homo sapiens.  
XX  
XX FH Key Location/Qualifiers  
XX CDS 1..1503  
XX /\*tag= a  
XX /product= "Beta secretase"  
XX /note= "No stop codon given"  
XX  
XX FT sig\_peptide 1..135  
XX mat\_peptide 136..1503  
XX /\*tag= b  
XX /\*tag= c  
XX  
XX EN WO200058479-A1.  
XX  
XX PD 05-OCT-2000.  
XX  
XX 23-MAR-2000; 2000WO-US007755.  
XX  
XX 26-MAR-1999; 99US-00277229.  
XX  
XX (AMGE-) AMGEN INC.  
XX  
XX PI Citron M, Vassar RJ, Bennett BD;  
XX WPI; 2000-594643/56.  
XX DR P-PSDB; AAY94767.  
XX  
XX PT Isolated beta-secretase nucleic acids and encoded polypeptides, useful  
XX for diagnosis and gene therapy of Alzheimer's disease.  
XX  
XX PS Claim 1; Fig 1; 145pp; English.  
XX  
XX CC This invention relates to 3 nucleotide sequences encoding beta-secretase  
XX proteins. Beta-secretase is an enzyme involved in the production of one  
XX of the components of amyloid plaques involved in Alzheimer's disease. The  
XX invention includes an expression vector comprising the nucleotide  
XX sequence, a host cell comprising the expression vector, and a process for  
XX producing the protein through culturing the transformed cells. Also  
XX included in the invention are a polypeptide derivative of the beta-  
XX secretase protein, a fusion protein comprising beta-secretase fused to a  
XX heterologous amino acid sequence, and a method for modulating the levels  
XX of beta-secretase polypeptide in a mammal comprising administering the  
XX polynucleotide sequence. Beta-secretase exhibits neuroprotective and  
XX neurotropic activity. The beta-secretase nucleotide sequence may be used to  
XX map locations of the beta-secretase gene and related genes on chromosomes  
XX and as hybridization probes in diagnostic assays to test for the presence  
XX of beta-secretase DNA or RNA, such as in Alzheimer's disease, Down's  
XX syndrome, and amyloid angiopathy. The nucleotide sequence may also be  
XX used as anti-sense inhibitors of beta-secretase expression, in gene  
XX therapy of Alzheimer's disease, and for the identification of compounds  
XX that modulate beta-secretase activity. Antibodies to the beta-secretase  
XX protein may be used for in vitro and in vivo diagnostic purposes to  
XX detect the presence of beta-secretase polypeptide in a body fluid or cell  
XX sample. The present sequence represents human cDNA encoding beta-  
XX secretase  
XX  
XX SQ Sequence 1503 BP; 305 A; 448 C; 431 G; 319 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x AAA28278 ..  
Alignment segment 1/1: (+)

Quality: 104.00      Score: 35.9  
 Matching length: 20      Total length: 20  
 Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
 Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
 Gaps: 0

## Alignment:

```

22  ThrGlnHieGlylleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
    |||||
64  ACCGACGACGCGCATCCGCTGCCCTCGCAGCGGCGCTGGGGGCGCCCC 113
    |||||
38  OlengGlyLeu 41
    |||||
114  CCTGGGGGCTG 123
  
```

Sequence name: rnp2ndb:AAA59550

Sequence documentation:

ID AAA59550 standard; DNA; 1503 BP.

AC AAA59550;

XX 14-NOV-2000 (first entry)

DE DNA encoding a human beta-secretase enzyme.

KM Beta-secretase; beta-amyloid precursor protein; beta-amyloid peptide;  
 KM amyloid plaque component; Alzheimer's disease; amyloidogenic disease;  
 KM inhibitor; ss.

OS Homo sapiens.

FH Key Location/Qualifiers

FT CDS 1..1503

FT /tag= a

FT /product= "beta-secretase"

FT /note= "no termination codon given"

XX MO200047618-A2.

XX 17-AUG-2000.

XX 10-FEB-2000; 2000MO-US003819.

XX 10-FEB-1999; 99US-0119571P.

XX 15-JUN-1999; 99US-0139172P.

XX (ELAN-) ELAN PHARM INC.

XX Anderson JP, Baai G, Doane MT, Frigon N, John V, Power M;

XX Sinha S, Tatsuno G, Tung J, Wang S, Mcconlogue L;

XX MPI; 2000-533011/48.

XX P-PSDB; AAB07896.

PT Purified beta-secretase protein used in assays to discover inhibitors  
 PT which can be used for the treatment of amyloidogenic diseases e.g.  
 PT Alzheimer's disease.

PS Disclosure; Fig 1A; 121pp; English.

CC The specification describes a beta-secretase enzyme. The enzyme cleaves  
 CC beta-amyloid precursor protein to produce beta-amyloid peptide. This  
 CC enzyme is therefore implicated in the production of amyloid plaque  
 CC components which accumulate in the brains of individuals afflicted with  
 CC Alzheimer's disease. Inhibitors of beta-secretase are administered to a  
 CC mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-  
 CC like pathology to test if they maintain or improve cognitive ability or  
 CC reduce the plaque burden. The compounds are used for the treatment of  
 CC amyloidogenic diseases e.g. Alzheimer's disease. The present sequence  
 CC encodes a human beta-secretase enzyme  
 XX

SQ Sequence 1503 BP; 305 A; 448 C; 431 G; 319 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAA59550 ..

Alignment segment 1/1: (+)

Quality: 104.00      Score: 35.9  
 Matching length: 20      Total length: 20  
 Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
 Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
 Gaps: 0

## Alignment:

```

22  ThrGlnHieGlylleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
    |||||
64  ACCGACGACGCGCATCCGCTGCCCTCGCAGCGGCGCTGGGGGCGCCCC 113
    |||||
38  OlengGlyLeu 41
    |||||
114  CCTGGGGGCTG 123
  
```

Sequence name: rnp2ndb:ACC84849

Sequence documentation:

ID ACC84849 standard; DNA; 1506 BP.

XX ACC84849;

XX 12-SEP-2003 (first entry)

DE Human memapsin 2 protein encoding DNA.

KM Memapsin 1; nootropic; neuroprotective; memapsin 2; beta secretase;  
 KM beta-amyloid protein; Alzheimer's disease; human; gene; ds.

OS Homo sapiens.

FH Key Location/Qualifiers

FT CDS 1..1506

FT /tag= a

FT /product= "memapsin 2"

FT sig\_peptide 1..63

FT /tag= b

FT mat\_peptide 64..1503

FT /tag= c

XX MO2003039454-A2.

XX 15-MAY-2003.

XX 23-OCT-2002; 2002MO-US034324.

XX 23-OCT-2001; 2001US-0335952P.

XX 27-NOV-2001; 2001US-033545P.

XX 14-JAN-2002; 2002US-0348464P.

XX 14-JAN-2002; 2002US-0348615P.

XX 20-JUN-2002; 2002US-0390804P.

XX 19-JUL-2002; 2002US-0397557P.

XX 19-JUL-2002; 2002US-0397619P.

XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.

XX (UNIT) UNIV ILLINOIS FOUND.

XX Ghosh AK, Tang J, Bilcer G, Chang W, Hong L, Koelsch G, Loy J;

XX Turner RT;

XX MPI; 2003-541410/51.

XX P-PSDB; ABR61928.

PT New peptide compounds are memapsin beta secretase inhibitors used for  
 PT treating Alzheimer's disease.  
 XX

PS Claim 101; Fig 8; 407bp; English.  
 XX  
 CC The invention relates to peptide compounds of specified formula. The  
 CC compounds exhibit memapsin 2-beta secretase inhibitory activity relative  
 CC to memapsin 1-beta secretase and reduce the accumulation of beta-amyloid  
 CC protein. The compounds can be used for treating Alzheimer's disease. The  
 CC present sequence represents a human memapsin 2 protein encoding DNA  
 CC (GenBank Index (GI):21040369)  
 XX  
 SQ Sequence 1506 BP; 306 A; 449 C; 431 G; 320 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ACC84849 ..  
 Alignment segment 1/1: (+)  

Matching length:	104.00	Score:	35.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

 Alignment:  
 22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
 64 ACCGACGCGGATCCGGCTGCCCTGGCGACGGGCTGGGGGGGCGCC 113  
 38 OleuGlyLeu 41  
 114 CTTGGGGCTG 123  
 Sequence name: rmp2ndb:ADL18183  
 Sequence documentation:  
 ID ADL18183 standard; cDNA; 1506 BP.  
 AC ADL18183;  
 XX  
 DT 06-MAY-2004 (first entry)  
 XX  
 DE Human APP beta-secretase encoding cDNA SEQ ID NO.103.  
 XX  
 KW chimeric protein; signal protein; trafficking signal targeting;  
 KW proteolytic cleavage site; protease; protease inhibitor; enzyme; human;  
 KW APP beta-secretase; gene; ss.  
 XX  
 OS Homo sapiens.  
 OS  
 PN MO2003014381-A1.  
 XX  
 PD 20-FEB-2003.  
 XX  
 PF 08-AUG-2002; 2002MO-KR001515.  
 XX  
 PR 10-AUG-2001; 2001KR-00048123.  
 XX  
 PA (AHRA-) AHRAM BIOSYSTEMS INC.  
 XX  
 PI Hwang I, Kim DH, Lee YJ;  
 XX  
 DR WPI: 2003-256596/25.  
 DR P-PSDB; ADL18184.  
 XX  
 PT New chimeric protein, useful for detecting protease inhibitors inside the  
 PT cell or tissue.  
 XX  
 PS Disclosure; SEQ ID NO 103; 214bp; English.  
 XX  
 CC The present invention describes a chimeric protein comprising at least  
 CC one signal protein that has a trafficking signal targeting to a  
 CC subcellular organelle and at least one proteolytic cleavage site for a  
 CC protease. The chimeric protein is constructed, so that: (a) the  
 CC trafficking signals of all the signal proteins are inactivated by linking

CC the proteolytic site or a signal masking protein through the proteolytic  
 CC site to the N-or C- terminus of the signal proteins, and so the chimeric  
 CC protein is present in cytosol; (b) the trafficking signal of at least one  
 CC signal protein is activated when the proteolytic cleavage site is cleaved  
 CC by the protease, and as a result at least one fragment protein that  
 CC includes the activated signal protein is a transported to a subcellular  
 CC organelle; and (c) the chimeric protein is labelled with at least one  
 CC fluorescent protein and the position and intensity distribution of the  
 CC fluorescent label signal in the cell is altered depending on the cleavage  
 CC by the protease. Also described: (1) a recombinant gene comprising a  
 CC nucleic acid sequence encoding the chimeric protein which is constructed  
 CC to express the chimeric protein in a cell; (2) a cell transformed with  
 CC the recombinant gene or vector; (3) analyzing the activity of a protease  
 CC in vivo; (4) screening protease inhibitors in vivo; (5) a system for  
 CC detecting a protease inside a cell; (6) a nucleic acid comprising the  
 CC sequence encoding the chimeric protein for detecting protease activity in  
 CC a cell; (7) a vector comprising the nucleic acid; (8) a kit for detecting  
 CC a protease inside a cell comprising the chimeric protein or the vector;  
 CC (9) detecting a protease inside a cell or tissue; and (10) detecting a  
 CC protease inhibitor in vivo. The chimeric protein is useful for detecting  
 CC protease inhibitors inside the cell or tissue. The present sequence  
 CC encodes a human APP beta-secretase, which is used in the exemplification  
 CC of the present invention.  
 XX  
 SQ Sequence 1506 BP; 306 A; 449 C; 431 G; 320 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ADL18183 ..  
 Alignment segment 1/1: (+)  

Matching length:	104.00	Score:	35.9
Matching Percent Similarity:	100.00	Total length:	20
Total Percent Similarity:	100.00	Matching Percent Identity:	100.00
Gaps:	0	Total Percent Identity:	100.00

 Alignment:  
 22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
 64 ACCGACGCGGATCCGGCTGCCCTGGCGACGGGCTGGGGGGGCGCC 113  
 38 OleuGlyLeu 41  
 114 CTTGGGGCTG 123  
 Sequence name: rmp2ndb:ADQ82259  
 Sequence documentation:  
 ID ADQ82259 standard; cDNA; 1524 BP.  
 XX  
 AC ADQ82259;  
 XX  
 DT 21-OCT-2004 (first entry)  
 XX  
 DE Human BACE1 coding sequence.  
 XX  
 KW transgenic animal; beta-site amyloid precursor protein cleaving enzyme;  
 KW BACE1; Hemostatic; Neuroprotective; Nootropic; Beta-secretase inhibitor;  
 KW amyloid beta; neurodegenerative disease; Alzheimer's disease;  
 KW cerebral amyloid angiopathy; Lewy body dementia; Down's syndrome;  
 KW hereditary cerebral hemorrhage; amyloidosis; Guam Parkinson-Dementia; ss.  
 XX  
 OS Homo sapiens.  
 OS  
 PN MO2004062627-A2.  
 XX  
 PD 29-JUL-2004.  
 XX  
 PF 13-JAN-2004; 2004MO-US000883.  
 XX  
 PR 13-JAN-2003; 2003US-0439633P.

XX (REGC ) UNIV CALIFORNIA.  
 XX Masliah E, Rockenstein E;  
 XX WPI; 2004-544036/52.  
 XX  
 XX New non-human transgenic animal overexpressing the (human) beta-site  
 PT amyloid precursor protein cleaving enzyme (BACE1), useful as a model for  
 PT conditions such as Alzheimer's disease, and in screening for therapeutic  
 PT agents.

PS Example 1; SEQ ID NO 1; 54pp; English.

XX The present invention relates to a transgenic non-human animal for  
 CC overexpressing beta-site amyloid precursor protein cleaving enzyme  
 CC (BACE1) comprising cells containing a DNA transgene encoding for BACE1.  
 CC The transgenic non-human animal is useful as a disease model, in studying  
 CC the in vivo and in vitro regulation and effects of BACE1 in specific  
 CC tissue types, in examining the role of BACE1 proteins in the accumulation  
 CC of amyloid beta, and for developing therapies for amyloid beta-related  
 CC conditions. The method, agents or compositions are useful for treating  
 CC neurodegenerative disease, e.g. Alzheimer's disease, cerebral amyloid  
 CC angiopathy, Lewy body dementia, Down's syndrome, hereditary cerebral  
 CC hemorrhage with amyloidosis (Dutch type), or Guam Parkinson-Dementia  
 CC complex. The present sequence represents human BACE1 coding sequence.

XX Sequence 1524 BP; 309 A; 456 C; 437 G; 322 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADQ82259 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	35.9
Matching Percent Similarity:	20	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
76 ACCGACGACGCGATCCGCTGCCCTGCGCAGCGGCGGCGCCCC 125
38 oLeuGlyLeu
126 CTTGGGGCTG
135

```

Sequence name: rmgp2ndb:ABA02406

Sequence documentation:  
 ID ABA02406 standard; cDNA; 1527 BP.

XX ABA02406;

XX 26-FEB-2002 (first entry)

XX FLAG-tagged human beta-secretase encoding cDNA.

XX Human; beta-secretase; FLAG tag; inhibitor; amine compound;  
 KW beta amyloid protein production; head injury; spinal injury;  
 KW amyloid precursor protein alpha secretion; nerve damage;  
 KW meningitis sequelae; cerebral paralysis; memory disorder; mental disease;  
 KW neurotropic; neuroprotective; cerebroprotective; ss.

XX Homo sapiens.  
 OS Synthetic.

XX Key Location/Qualifiers  
 FT CDS 1..1527  
 FT /tag= a  
 FT /partial

/product= "FLAG-tagged human beta-secretase"  
 /note= "No stop codon given in the specification"

WO200187293-A1.

22-NOV-2001.

18-MAY-2001; 2001WO-DP04144.

19-MAY-2000; 2000JP-00152758.

(TAKE ) TAKEDA CHEM IND LTD.

PI Miyamoto M, Matsui J, Fukumoto H, Tarui N;

DR WPI; 2002-055640/07.

DR P-PSDB; AAM52697.

PT Beta-secretase inhibitor used for treating e.g. Alzheimer's disease and  
 PT injury to brain or spine, and neurodegeneration, comprises amine  
 PT compound.

PS Example; Page 78-79; 86pp; Japanese.

XX The invention relates to novel amine compounds which are beta-secretase  
 CC inhibitors. The beta-secretase compounds also have the ability to promote  
 CC amyloid precursor protein alpha secretion and to inhibit beta amyloid  
 CC protein production. The beta-secretase inhibitors of the invention can be  
 CC used for treating head or spinal injuries, nerve damage, sequelae of  
 CC meningitis, cerebral paralysis, memory disorders and mental diseases. The  
 CC present sequence represents cDNA encoding a FLAG-tagged human beta-  
 CC secretase used in the exemplifications of the invention

XX Sequence 1527 BP; 315 A; 451 C; 438 G; 323 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABA02406 ..

Alignment segment 1/1: (+)

Matching length:	104.00	Total length:	35.9
Matching Percent Similarity:	20	Matching Percent Identity:	20
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
64 ACCGACGACGCGATCCGCTGCCCTGCGCAGCGGCGGCGCCCC 113
38 oLeuGlyLeu
114 CTTGGGGCTG
123

```

Sequence name: rmgp2ndb:ADJ71857

Sequence documentation:  
 ID ADJ71857 standard; cDNA; 1527 BP.

XX ADJ71857;

XX 06-MAY-2004 (first entry)

XX Human cDNA SEQ ID NO: 6.

XX N-Substituted aryl carbamate; neuroprotective; neurotropic; neuroleptic;  
 KW muscular; antiparkinsonian; cerebroprotective; vasotropic; haemostatic;  
 KW antiarteriosclerotic; antidepressant; neurodegeneration; nerve damage;  
 KW memory disorders; psychiatric disease; myopathy;  
 KW mild cognitive impairment; Alzheimer's disease; ss; gene; human.

OS Homo sapiens.



XX Key Location/Qualifiers  
FH CDS 1..1527  
FT /\*tag= a  
XX MO2004014843-A1.  
XX 19-FEB-2004.  
XX PD  
XX 07-AUG-2003; 2003WO-JP010045.  
XX PR 09-AUG-2002; 2002JP-00233231.  
XX (TAKE ) TAKEDA CHEM IND LTD.  
XX PA  
XX Uchikawa O, Aso K, Koike T, Tarui N, Hirai K;  
XX WPI; 2004-238691/22.  
XX P-PSDB; ADJ71858.  
XX  
XX New/known aryl carboxamide derivatives as inhibitors of aspartic acid  
PT protease and beta secretase for treating Alzheimer's disease,  
PT neurodegeneration, nerve damage, memory disorders, psychiatric disease,  
PT myopathy and cognitive impairment.  
XX  
XX Example 1; SEQ ID NO 6; 90pp; Japanese.  
XX  
XX The invention relates to novel N-Substituted aryl carboxamide compounds  
CC (1) and their salts. A compound of the invention has neuroprotective,  
CC neurotropic, neuroleptic, muscular-gen., antiparkinsonian,  
CC cerebroprotective, vasotropic, haemostatic, antiarteriosclerotic, and  
CC antidepressant activity. The compounds are used to prevent and treat  
CC neurodegeneration, nerve damage, memory disorders, psychiatric disease,  
CC myopathy, mild cognitive impairment, or Alzheimer's disease, including  
CC Down's syndrome, senile dementia, Parkinson's disease, Creutzfeldt-Jacob  
CC disease, amyotrophic lateral sclerosis, diabetic neuropathy, Huntington's  
CC chorea, multiple sclerosis, cerebrovascular disorders, cerebral embolism,  
CC cerebral haemorrhage, cerebral arteriosclerosis, head injuries, spinal  
CC injuries, post-encephalitic disease, cerebral palsy, depression, panic  
CC disorder and schizophrenia. The present sequence is used in the  
CC exemplification of the invention.  
XX  
XX Sequence 1527 BP; 317 A; 447 C; 438 G; 325 T; 0 U; 0 Other;  
SQ  
Alignment of: us-10-726-967a-1 x ADJ71857 ..  
Alignment segment 1/1: (+)  
Matching length: 104.00  
Total length: 35.9  
Matching Percent Similarity: 100.00  
Total Percent Identity: 100.00  
Total Percent Identity: 100.00  
Gaps: 0  
Alignment:  
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCGACGACGGGATCGGCTGCCCTGAGAAAGTGTGGGGGGGCCCC 113  
|||||  
38 OleuGlyLeu 41  
|||||  
114 CCTGGGGCTG 123  
Sequence name: rmp2ndb:ADP74534  
Sequence documentation:  
ID ADP74534 standard; cDNA; 1527 BP.  
XX  
XX ADP74534;  
XX  
XX 12-AUG-2004 (first entry)  
XX

DE Human indole compound-related beta-secretase cDNA.  
XX  
XX indole; neuroprotective; neurotropic; antiparkinsonian; myopathy;  
XX neuropathy; memory defect; senile dementia; amnesia; mental illness;  
XX amyotrophic lateral sclerosis; Alzheimer's; Creutzfeldt Jacob; CJD;  
XX human.  
XX  
XX Homo sapiens.  
XX  
XX Key Location/Qualifiers  
FH CDS 1..1527  
FT /\*tag= a  
FT /product= "Human indole compound-related beta-secretase  
FT protein"  
XX  
XX JP2004149429-A.  
XX  
XX 27-MAY-2004.  
XX PD  
XX 29-OCT-2002; 2002JP-00314580.  
XX PR 29-OCT-2002; 2002JP-00314580.  
XX (TAKE ) TAKEDA CHEM IND LTD.  
XX PA  
XX WPI; 2004-405630/38.  
XX P-PSDB; ADP74535.  
XX  
XX Novel indole compound useful for treating senile dementia, Alzheimer's  
PT disease, Creutzfeldt-Jacob disease, amyotrophic lateral sclerosis,  
PT Parkinson's disease, neuropathy, senile dementia, amnesia or myopathy.  
XX  
XX Example 119; SEQ ID NO 6; 67pp; Japanese.  
XX  
XX The invention relates to a novel indole compound. The compound of the  
CC invention demonstrates neuroprotective, neurotropic and antiparkinsonian  
CC activities and may be useful as a preventive or therapeutic agent of  
CC myopathy, neuropathy, defects of memory e.g. senile dementia or amnesia,  
CC mental illness and neurodegenerative disease, including Alzheimer's  
CC disease, Creutzfeldt Jacob disease, amyotrophic lateral sclerosis or  
CC Parkinson's disease. The peptide of the invention may be useful for  
CC measuring the beta-secretase inhibitory activity of a test compound. The  
CC current sequence is that of the human indole compound-related beta-  
CC secretase cDNA of the invention.  
XX  
XX Sequence 1527 BP; 317 A; 447 C; 438 G; 325 T; 0 U; 0 Other;  
SQ  
Alignment of: us-10-726-967a-1 x ADP74534 ..  
Alignment segment 1/1: (+)  
Matching length: 104.00  
Total length: 35.9  
Matching Percent Similarity: 100.00  
Total Percent Identity: 100.00  
Total Percent Identity: 100.00  
Gaps: 0  
Alignment:  
22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
|||||  
64 ACCGACGACGGGATCGGCTGCCCTGAGAAAGTGTGGGGGGGCCCC 113  
|||||  
38 OleuGlyLeu 41  
|||||  
114 CCTGGGGCTG 123  
Sequence name: rmp2ndb:ADH34044  
Sequence documentation:  
ID ADH34044 standard; cDNA; 1542 BP.  
XX

AC ADH34044;  
 XX  
 DT 11-MAR-2004 (first entry)  
 XX  
 DE Human cDNA for His-tagged BACE (Beta-secretase).  
 XX  
 KW Beta-secretase; BACE; BACE-2; inhibitor; Alzheimer's disease;  
 KW neuroprotective; neurotrophic; amyloid precursor protein;  
 KW beta-amyloid peptide; cerebrovascular amyloidosis; ss; gene.  
 XX  
 OS Synthetic.  
 OS Homo sapiens.  
 XX  
 EN US2003125257-A1.  
 XX  
 PD 03-JUL-2003.  
 XX  
 PF 18-DEC-2002; 2002US-00322684.  
 XX  
 PR 20-DEC-2001; 2001EP-00130282.  
 XX  
 PA (BROC/) BROCKHAUS M.  
 PA (DOEB/) DOEBELI H.  
 PA (GRUE/) GRUENINGER F.  
 PA (HUGU/) HUGENIN P.  
 PA (KITA/) KITAS E A.  
 PA (NELB/) NEUBOCK-HOCHSTETTER P.  
 XX  
 PI Brockhaus M, Doebeli H, Grueninger F, Hugenin P, Kitas EA;  
 PI Neubock-Hochstetter P;  
 XX  
 DR MPI; 2004-088811/09.  
 XX  
 PT New inhibitors of beta-secretase, useful for treating cerebrovascular  
 PT amyloidosis, especially Alzheimer's disease, and for drug screening.  
 XX  
 PS Example 1; SEQ ID NO 1; 23pp; English.  
 XX  
 CC The invention relates to peptide beta-secretase (bS) inhibitors of  
 CC generic formula appearing as ADH34057. Also included are an assay for  
 CC identifying inhibitors of bS, screening compounds for inhibition of bS  
 CC activity, a kit for identifying a bS inhibitor and bS inhibitors  
 CC identified using the kit. The bS used is isolated or recombinant, and  
 CC purified, especially a full-length bS, specifically BACE or BACE-2. The  
 CC inhibitors of beta-secretase (which is involved in degradation of amyloid  
 CC precursor protein to beta-amyloid peptide) are used for treating patients  
 CC with, or predisposed to, cerebrovascular amyloidosis, specifically  
 CC Alzheimer's disease. They are also used to prepare tagged derivatives,  
 CC useful in screening compounds for identifying other bS inhibitors and for  
 CC radioimaging or positron emission tomographic imaging. The present  
 CC sequence is encodes a His-tagged BACE protein used to produce BACE  
 CC protein recombinantly.  
 XX  
 SQ Sequence 1542 BP; 322 A; 459 C; 433 G; 328 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ADH34044 ..  
 Alignment segment 1/1: (+)  
 Quality: 104.00  
 Matching length: 20 Total length: 35.9  
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
 Gaps: 0  
 Alignment:  
 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
 79 ACCGACGACGGCATCCGACTGCGACGCGAGGAGTGGAGGTCACC 128  
 38 oleuGlyLeu  
 41

129 TCTGGGACTG 138  
 Sequence name: rngp2ndb:AAA15663  
 Sequence documentation:  
 ID AAA15663 standard; cDNA; 1977 BP.  
 XX  
 AC AAA15663;  
 XX  
 DT 03-AUG-2000 (first entry)  
 XX  
 DE Human aspartyl protease 2 (b) (Asp2) nucleotide sequence.  
 XX  
 KW Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;  
 KW Alzheimer's disease; beta secretase site; ss.  
 XX  
 OS Homo sapiens.  
 OS  
 XX  
 PN WO200017369-A2.  
 XX  
 PD 30-MAR-2000.  
 XX  
 PF 23-SEP-1999; 99WO-US020881.  
 XX  
 PR 24-SEP-1998; 98US-0101594P.  
 XX  
 PA (PHAA) PHARMACIA & UPJOHN CO.  
 XX  
 PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
 PI P-PSDB; AAY88426.  
 XX  
 DR MPI; 2000-303209/26.  
 XX  
 PT New enzyme designated human aspartase useful in research into Alzheimer's  
 PT disease is capable of cleaving amyloid protein precursor at the beta  
 PT secretase site to produce amyloid beta peptide.  
 XX  
 PS Claim 8; Fig 3; 183pp; English.  
 XX  
 CC This sequence represents the human aspartyl protease 2 (Asp2) nucleotide  
 CC sequence. The invention relates to a protease (e.g. Asp2) capable of  
 CC cleaving the beta secretase site of amyloid precursor protein (APP). The  
 CC protease contains a sequence encoding the amino acid sequence DTG and a  
 CC sequence encoding DSG or DTG separated by 100-300 amino acids. When  
 CC mutated the APP gene causes an autosomal dominant form of Alzheimer's  
 CC disease. APP localises to the cell surface membrane and have a single C-  
 CC terminal transmembrane domain. Proteolytic processing of APP produces the  
 CC amyloid beta protein, which is possibly very important in Alzheimer's  
 CC disease. The invention includes a nucleotide sequence encoding the  
 CC protease, a vector containing the nucleotide sequence, and a cell line  
 CC comprising the vector. Methods for screening for inhibitors of beta  
 CC secretase activity are also given in the invention. The human aspartase  
 CC protein and nucleotide sequences and the methods for identifying  
 CC inhibitors of the protease, are useful in the treatment of and research  
 CC in to Alzheimer's disease  
 XX  
 SQ Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x AAA15663 ..  
 Alignment segment 1/1: (+)  
 Quality: 104.00  
 Matching length: 20 Total length: 35.9  
 Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
 Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
 Gaps: 0  
 Alignment:  
 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAlaPr 38  
 64 ACCGACGACGGCATCCGCTGCGACGCGGCTGGGGGGGCGCCCC 113

38 olenglylen  
|||||  
114 CCTGGGCGCTG 123

Sequence name: rngp2ndb:AA511703

Sequence documentation:

ID AA511703 standard; DNA, 1977 BP.

AC AA511703;

DT 24-OCT-2001 (first entry)

XX DNA encoding human aspartyl protease 2b (Asp-2b).

XX Human; aspartyl protease 1; Asp-1; nootropic; neuroprotective;

KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;

XX beta-secretase; Alzheimer's disease; ds.

OS Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1431

FT /tag= a

FT /product= "Aspartyl protease-2b (Asp-2b)"

FT sig\_peptide 1..63

FT /tag= b

FT misc\_feature 64..135

FT /tag= c

FT /note= "Pre-propeptide"

FT misc\_feature 136..171

FT /tag= d

FT /note= "Propeptide"

FT mat\_peptide 172..1427

FT /tag= e

FT /note= "Mature Aspartyl protease-2b"

XX W0200149097-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000797.

XX 09-MAY-2001; 2001WO-IB000797.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI: 2001-502548/55.

XX P-PSDB: AAU07203.

41  
|||||  
123

Sequence name: rngp2ndb:AA511703

Sequence documentation:

ID AA511703 standard; DNA, 1977 BP.

AC AA511703;

DT 24-OCT-2001 (first entry)

XX DNA encoding human aspartyl protease 2b (Asp-2b).

XX Human; aspartyl protease 1; Asp-1; nootropic; neuroprotective;

KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;

XX beta-secretase; Alzheimer's disease; ds.

OS Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1431

FT /tag= a

FT /product= "Aspartyl protease-2b (Asp-2b)"

FT sig\_peptide 1..63

FT /tag= b

FT misc\_feature 64..135

FT /tag= c

FT /note= "Pre-propeptide"

FT misc\_feature 136..171

FT /tag= d

FT /note= "Propeptide"

FT mat\_peptide 172..1427

FT /tag= e

FT /note= "Mature Aspartyl protease-2b"

XX W0200149097-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000797.

XX 09-MAY-2001; 2001WO-IB000797.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI: 2001-502548/55.

XX P-PSDB: AAU07203.

CC for assaying for modulators of beta-secretase activity; identifying

CC agents that inhibit the APP processing activity of human Asp2 aspartyl

CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2

CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.

CC Agents identified by the above methods are useful for treating

CC Alzheimer's disease; and for identifying modulators of amyloid-beta

CC (Abeta) peptide production, for use in designing therapeutics for the

CC treatment or prevention of Alzheimer's disease. Probes and primers

CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp

CC nucleic acids in vitro assays and in Northern and Southern blots. The

CC present sequence represents the coding sequence of human Asp-2b used in

CC the methods of the invention

XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;

XX Alignment of: us-10-726-967a-1 x AA511703 ..

XX Alignment segment 1/1: (+)

XX Matching length: 104.00

XX Matching Percent Similarity: 100.00

XX Total Percent Similarity: 100.00

XX Gaps: 0

XX Alignment:

XX 22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38

XX ||||||| 113

XX 64 ACCGACAGCGGCGATCGGCTGCCCTGCCGACGCGGCGGCGGCGCC 113

XX |||||||

XX 38 olenglylen 41

XX |||||||

XX 114 CCTGGGCGCTG 123

Sequence name: rngp2ndb:AD17866

Sequence documentation:

ID AD17866 standard; cDNA; 1977 BP.

XX AAD17866;

XX 10-DEC-2001 (first entry)

XX Human aspartyl protease 2(b) [Hu-Asp2(b)] cDNA.

XX Human; aspartyl protease 2(b); Asp2(b); amyloid precursor protein; APP;

KM Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;

KW amyloid plaque; neuronal loss; proteolytic; nootropic; neuroprotective;

XX chromosome 11q23.3-24.1; ss.

OS Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1431

FT /tag= a

FT /product= "Human aspartyl protease 2(b)"

FT sig\_peptide 1..63

FT /tag= b

FT mat\_peptide 64..1428

FT /tag= c

FT /product= "Mature human aspartyl protease 2(b)"

XX GB2357767-A.

XX 04-JUL-2001.

XX 22-SEP-2000; 2000GB-00023315.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WO-US020881.

XX 13-OCT-1999; 99US-00416901.



|||||  
114 CTGGGGCTG

123

Sequence name: rngp2ndb:AAD06740

Sequence documentation:

ID AAD06740 standard; cDNA; 1977 BP.

XX AAD06740;

XX 10-AUG-2001 (first entry)

XX Human aspartyl protease 2b (Asp2b) cDNA.

XX Human; alpha-secretase; amyloid precursor protein; APP; therapy; 2b;

XX Alzheimer's disease; antialzheimer's; aspartyl protease 2b; Asp 2b;

XX beta-secretase; chromosome 11q23.3-24.1; ss.

XX Homo sapiens.

XX Key

XX CDS

XX sig\_peptide

XX sig\_peptide

XX sig\_peptide

XX mat\_peptide

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

Location/Qualifiers

1. .1431

/\*tag= a

/product= "Human aspartyl protease 2b"

1. .63

/\*tag= b

64. .135

/\*tag= c

/note= "Pre-pro-peptide"

136. .171

/\*tag= d

/note= "Pro-peptide"

172. .1428

/\*tag= e

/product= "Human mature aspartyl protease 2b"

WO200123533-A2.

05-APR-2001.

22-SEP-2000; 2000MO-US026080.

23-SEP-1999; 99US-0155493P.

23-SEP-1999; 99MO-US020881.

13-OCT-1999; 99US-00416901.

06-DEC-1999; 99US-0169232P.

(PHAA ) PHARMACIA &amp; UPJOHN CO.

Gurney M, Bienkowski MJ;

WPI; 2001-290516/30.

P-PSDB; AAE02582.

Enzymes that cleave the alpha-secretase site of the amyloid precursor

protein, useful for the treatment of Alzheimer's disease.

Example 2; Page 129; 189pp; English.

The present invention relates to enzymes for cleaving the alpha-

secretase site of the amyloid precursor protein (APP) and methods of

identifying those enzymes. The methods may be used to identify enzymes

that may be used to cleave the alpha-secretase cleavage site of the APP

protein. The enzymes may be used to treat or modulate the progress of

Alzheimer's disease. The present sequence is human aspartyl protease

(Asp) 2b cDNA. Asp 2b has beta-secretase protease activity. Asp2 gene is

located on chromosome 11q23.3-24.1

Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD06740 ..

Alignment segment 1/1: (+)

Quality: 104.00  
Matching Length: 20  
Matching Percent: 100.00  
Total Percent Similarity: 100.00  
Total Percent Identity: 100.00  
Gaps: 0

Alignment:

22 ThrGlnHSGlyTLeaXgLeuProLeuArgSerGlyLeuGlyAlaApr 38

64 ACCGACGACGCGATCGGCTGCCCTCGCGACGCGCTGGGGGCGCCCC 113

38 OlenglyLeu 41

114 CTGGGGCTG 123

Sequence name: rngp2ndb:AAS11518

Sequence documentation:

ID AAS11518 standard; cDNA; 1977 BP.

XX AAS11518;

XX 24-OCT-2001 (first entry)

XX Human cDNA encoding Aspartyl protease 2 (b), Asp2 (b).

XX Human; Aspartyl protease; Asp2 (b); beta-secretase; neurotropic;

XX neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

XX amyloid-beta; Abeta; ss.

XX Homo sapiens.

XX Key

XX CDS

XX sig\_peptide

XX sig\_peptide

XX sig\_peptide

XX mat\_peptide

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

Location/Qualifiers

1. .1431

/\*tag= a

/product= "Asp2 (b)"

1. .63

/\*tag= b

64. .135

/\*tag= c

/label= Pre\_pro\_peptide

136. .171

/\*tag= d

/label= Pro\_peptide

172. .1503

/\*tag= e

/label= Mature\_Asp2 (b)

WO200149098-A2.

12-JUL-2001.

09-MAY-2001; 2001MO-IB000798.

09-MAY-2001; 2001MO-IB000798.

(BIEN/) BIENKOWSKI M J.

(GURN/) GURNEY M E.

(HEIN/) HEINRIKSON R L.

(PARO/) PARODI L A.

(YANR/) YAN R.

Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

WPI; 2001-502549/55.

P-PSDB; AAU06604.

Novel purified polypeptide comprising fragment of mammalian aspartyl

protease 2, lacking Asp2 transmembrane domain and retaining beta

secretase activity of Asp2 useful for identifying inhibitors of Asp2

activity.



PT /note= "aspartyl protease"  
XX GB2367060-A.  
XX  
XX 27-MAR-2002.  
XX  
XX 29-OCT-2001; 2001GB-00025934.  
XX  
XX 23-SEP-1999; 99US-00404133.  
XX 23-SEP-1999; 99US-0155493P.  
XX 23-SEP-1999; 99WO-US020881.  
XX 13-OCT-1999; 99US-00416901.  
XX 06-DEC-1999; 99US-0169232P.  
XX 22-SEP-2000; 2000GB-00023315.  
XX  
XX (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
XX Bienkowski MJ, Gurney M;  
XX WPI: 2002-397167/43.  
XX P-PSDB; ABB78591.  
XX  
XX Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
PT protease activity, e.g. for the diagnosis of Alzheimer's disease.  
XX  
XX Example 2; Fig 3; 182pp; English.  
XX  
XX The present invention describes a human aspartyl protease 1 (hu-Asp1)  
CC substrate (I) which comprises a peptide of no more than 50 amino acids,  
CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
CC (1) under acidic conditions; and (b) determining the level of hu-Asp1  
CC proteolytic activity; (2) a purified polynucleotide (III) comprising a  
CC nucleotide sequence that hybridizes under stringent conditions to the non-  
CC coding strand complementary to a defined 1804 nucleotide sequence (see  
CC AB52456) where the nucleotide sequence encodes a polypeptide having Asp1  
CC proteolytic activity and lacks nucleotides encoding a transmembrane  
CC domain); (3) a purified polynucleotide (III') comprising a sequence that  
CC hybridizes under stringent conditions to (III) (the nucleotide sequence  
CC encodes a polypeptide further lacking a pro-peptide domain corresponding  
CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)  
CC comprising (III) or (III') and (5) a host cell (V) transformed or  
CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease  
CC substrate (I) may be used as an enzyme substrate in assays to detect  
CC aspartyl protease activity, (II) and therefore diagnose diseases  
CC associated with aberrant hu-Asp1 expression and activity such as  
CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
CC sequence encodes hu-Asp2(b) from the present invention  
XX  
XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;  
SQ  
Alignment of: us-10-726-967a-1 x ABL52458 ..  
Alignment segment 1/1: (+)  
Matching Quality: 104.00 EScore: 35.9  
Matching length: 20 Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0  
Alignment:  
22 ThrGlnHieGlyIleargLeuProLeuAArgSerGlyLeuGlyGlyValAsp 38  
64 ACCCGACGACGCGATCCGCGCTGCCCTCCGCGACGCGCGCTGGGGGGCCCC 113  
38 OleuGlyLeu 41  
114 CCTGGGGGCTG 123

Sequence name: rngp2ndb:ADJ94317  
Sequence documentation:  
ID ADJ94317 standard; CDNA; 1977 BP.  
XX  
XX ADJ94317;  
XX  
XX 03-JUN-2004 (first entry)  
XX  
XX Human CDNA encoding aspartyl protease 2b, Asp-2b.  
DE  
XX Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);  
KW beta secretase; amyloid protein precursor; App; Alzheimer's disease;  
KW neurotrophic; neuroprotective; amyloid beta.  
XX  
XX Homo sapiens.  
OS  
XX US6706485-B1.  
XX  
XX 16-MAR-2004.  
XX  
XX 12-APR-2000; 2000US-00548376.  
XX  
XX 24-SEP-1998; 98US-0101594P.  
XX 23-SEP-1999; 99US-00404133.  
XX 23-SEP-1999; 99US-0155493P.  
XX 23-SEP-1999; 99WO-US020881.  
XX 13-OCT-1999; 99US-00416901.  
XX  
XX (PHAA ) PHARMACIA & UPJOHN CO.  
XX  
XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;  
XX WPI: 2004-236722/22.  
XX P-PSDB; ADJ94318.  
XX  
XX Identifying agents that modulate activity of Asp2 aspartyl protease  
PT useful for treating or preventing Alzheimer's disease involves comparing  
PT APP processing activity of protease in presence and absence of test  
PT agent.  
XX  
XX Claim 1; SEQ ID NO 5; 109pp; English.  
XX  
XX The invention relates to identifying agents that modulate activity of  
CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
CC precursor protein (APP) in the presence and absence of a test agent,  
CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
CC beta, determining APP processing activity of Asp2 in presence and absence  
CC of the test agent, and comparing the activities to identify agents that  
CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
CC the vector and the method of producing Hu-Asp polypeptide, an isolated  
CC antibody that specifically binds to Hu-Asp polypeptides, identifying a  
CC cell that can be used to screen for inhibitors of beta secretase  
CC activity, novel isoforms of amyloid protein precursor (APP), where the  
CC laet 2 carboxy terminus amino acids of that isoform are both lysine  
CC residues (e.g. those designated APP695-KK or carrying the Swedish  
CC mutation where KM at 595-596 is mutated to NV, designated e.g. APP695-Sw  
CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
CC for assaying for beta secretase activity and screening for inhibitors of  
CC beta-secretase) and polynucleotides that encode the APP proteins. The  
CC method is useful for identifying agents that modulate the activity  
CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
CC protease. Preferably, the method is useful for identifying agents that  
CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
CC precursor protein processing, are useful for treating or preventing  
CC Alzheimer's disease. The present sequence encodes an aspartyl protease of  
CC the invention.  
XX  
XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;  
SQ

Alignment of: us-10-726-967a-1 x AD050413 ..

Alignment segment 1/1: (+)

Matching length:	Quality:	Score:
20	104.00	35.9
Percent Similarity:	100.00	Percent Identity:
20	100.00	20
Total Percent Similarity:	100.00	Total Percent Identity:
0	100.00	100.00

Alignment:

```
22 Thrglnhlglyleargleuproleuargserglyleuglyalapr 38
|||||
64 ACCCAGCAGCGCATCCGCGCTGCCCTCGCGCAGCGCCTGGGAGGCGCCCC 113
|||||
38 OLeuglyleu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rngp2ndb;AD050413

Sequence documentation:

ID AD050413 standard; cDNA; 1977 BP.

AC ADO50413;

DT 29-JUL-2004 (first entry)

DE Human aspartyl protease (Asp)-2(b) cDNA.

KW Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;  
KW Alzheimer's disease; gene therapy; human; gene; chromosome 11q23.3-24.1;  
SS.

OS Homo sapiens.

Key Location/Qualifiers

FT CDS 1..1431

FT /\*tag= b

FT /product= "Human Asp-2 protein"

FT sig\_peptide 1..63

FT /\*tag= a

FT mat\_peptide 64..1428

FT /\*tag= c

FT /product= "Human mature Asp-2 protein"

PN US6737510-B1.

PD 18-MAY-2004.

PF 12-APR-2000; 2000US-00548373.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 22-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA ) PHARMACIA & UPJOHN CO.

PA

XX

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R,

XX WPI; 2004-387112/36.

DR P-PSDB; AD050414.

XX

XX

PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG

PT involved in processing amyloid precursor protein into amyloid beta,

PT useful in preparing a composition for treating or preventing Alzheimer's

PT disease.

XX Claim 1; SEQ ID NO 5; 108bp; English.

PS

XX

CC The invention relates to a method for identifying an agent that decreases  
CC the protease activity of the aspartyl protease (Asp) polypeptide. It also  
CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
CC cleavage site of the amyloid precursor protein (APP). The invention is  
CC useful in preparing a composition for treating or preventing Alzheimer's  
CC disease. It is also useful in gene therapy. The present sequence is human  
CC Asp-2 cDNA. Human Asp-2 gene is located at chromosome 11q23.3-24.1. This  
CC sequence is used to illustrate the method of the invention.

Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050413 ..

Alignment segment 1/1: (+)

Matching length:	Quality:	Score:
20	104.00	35.9
Percent Similarity:	100.00	Percent Identity:
20	100.00	20
Total Percent Similarity:	100.00	Total Percent Identity:
0	100.00	100.00

Alignment:

```
22 Thrglnhlglyleargleuproleuargserglyleuglyalapr 38
|||||
64 ACCCAGCAGCGCATCCGCGCTGCCCTCGCGCAGCGCCTGGGAGGCGCCCC 113
|||||
38 OLeuglyleu 41
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rngp2ndb;ADR75326

Sequence documentation:

ID ADR75326 standard; cDNA; 1977 BP.

AC ADR75326;

DT 18-NOV-2004 (first entry)

DE Human aspartyl protease (Asp)-2(b) cDNA.

KW Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;

KW chromosome identification; Alzheimer's disease; human; gene; ss.

OS Homo sapiens.

Key Location/Qualifiers

FT CDS 1..1431

FT /\*tag= b

FT /product= "Human Asp-2 protein"

FT sig\_peptide 1..63

FT /\*tag= a

FT mat\_peptide 64..1428

FT /\*tag= c

FT /product= "Human mature Asp-2 protein"

PN US2004166507-A1.

PD 26-AUG-2004.

PF 29-AUG-2003; 2003US-00652045.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (GURN/) GURNEY M E.

PA (BIEN/) BIENKOWSKI M J.

PA (HEIN/) HEINRICHSON R L.

PA (PARO/) PARODI L A.

PA (YANR/) YAN R.



XX Gurney ME, Bienkowiak MJ, Heinrichson RL, Parodi LA, Yan R;  
PI WPI, 2004-624916/60.  
DR P-PSDB; ADR75327.  
XX Novel purified/isolated polynucleotide encoding polypeptide having  
PT aspartyl protease activity involved in processing amyloid precursor  
PT protein into amyloid beta, useful in identifying agent decreasing  
PT activity of aspartyl protease.  
XX  
PS Claim 1; SEQ ID NO 5; 107bp; English.  
XX  
CC The invention relates to nucleic acid sequences encoding aspartyl  
CC protease (Asp) polypeptides having aspartyl protease activity involved in  
CC processing amyloid precursor protein (APP) into amyloid beta. The  
CC invention also relates to a method for identifying an agent that  
CC decreases the protease activity of the Asp. Asp DNA is useful in  
CC chromosome identification as they can hybridize with a specific location  
CC on a human chromosome and in identifying the relationship between genes  
CC and diseases (particular gene responsible for causing diseases). It is  
CC also useful for identifying candidates to modulate the progression of  
CC Alzheimer's disease. Asp is useful in raising antibodies that are useful  
CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The  
CC present sequence is the human Asp-2(b) cDNA. This sequence is used to  
CC illustrate the method of the invention.  
XX  
SQ Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x ADR75326 ..  
Alignment segment 1/1: (+)  
Matching Quality: 104.00 Score: 35.9  
Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0  
Alignment:  
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
64 ACCGAGCAGCGGATCCGCTGCCCTGCCAGCGGCTGGGGGGCCCC 113  
38 oLeuGlyLeu 41  
114 CTTGGGGCTG 123  
Sequence name: rnp2ndb:AAA15662  
Sequence documentation:  
ID AAA15662 standard; cDNA; 2070 BP.  
XX  
AC AAA15662;  
XX  
DT 03-AUG-2000 (first entry)  
XX  
DE Human aspartyl protease 2 (a) (Asp2) nucleotide sequence.  
XX  
KM Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;  
KM Alzheimer's disease; beta secretase site; ss.  
XX  
OS Homo sapiens.  
XX  
PN WO200017369-A2.  
XX  
PD 30-MAR-2000.  
XX  
PF 23-SEP-1999; 99WO-US020881.  
XX  
PR 24-SEP-1998; 98US-0101594P.  
XX

PA (PHAA) PHARMACIA & UPJOHN CO.  
XX  
XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
PI WPI, 2000-303209/26.  
DR P-PSDB; AAY88425.  
XX  
PT New enzyme designated human aspartase useful in research into Alzheimer's  
PT Disease is capable of cleaving amyloid protein precursor at the beta  
PT secretase site to produce amyloid beta peptide.  
XX  
XX  
PS Claim 5; Fig 2; 183bp; English.  
XX  
CC This sequence represents the human aspartyl protease 2 (Asp2) nucleotide  
CC sequence. The invention relates to a protease (e.g. Asp2) capable of  
CC cleaving the beta secretase site of amyloid precursor protein (APP). The  
CC protease contains a sequence encoding the amino acid sequence DTG and a  
CC sequence encoding DSG or DTG separated by 100-300 amino acids. When  
CC mutated the APP gene causes an autosomal dominant form of Alzheimer's  
CC disease. APP localises to the cell surface membrane and have a single C-  
CC terminal transmembrane domain. Proteolytic processing of APP produces the  
CC amyloid beta protein, which is possibly very important in Alzheimer's  
CC disease. The invention includes a nucleotide sequence encoding the  
CC protease, a vector containing the nucleotide sequence, and a cell line  
CC comprising the vector. Methods for screening for inhibitors of beta  
CC secretase activity are also given in the invention. The human aspartase  
CC protein and nucleotide sequences and the methods for identifying  
CC inhibitors of the protease, are useful in the treatment of and research  
CC in to Alzheimer's disease  
XX  
SQ Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x AAA15662 ..  
Alignment segment 1/1: (+)  
Matching Quality: 104.00 Score: 35.9  
Total length: 20  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0  
Alignment:  
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
64 ACCGAGCAGCGGATCCGCTGCCCTGCCAGCGGCTGGGGGGCCCC 113  
38 oLeuGlyLeu 41  
114 CTTGGGGCTG 123  
Sequence name: rnp2ndb:AA511702  
Sequence documentation:  
ID AA511702 standard; DNA; 2070 BP.  
XX  
AC AA511702;  
XX  
DT 24-OCT-2001 (first entry)  
XX  
DE DNA encoding human aspartyl protease 2a (Asp-2a).  
XX  
KM Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;  
KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;  
KM beta-secretase; Alzheimer's disease; ds.  
XX  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT CDS 1..1506  
FT /tag= a  
FT /product= "Aspartyl protease-2a (Asp-2a)"

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FT sig_peptide 1..63
FT /tag= b
FT misc_feature 64..135
FT /tag= c
FT /note= "Pre-propeptide"
FT misc_feature 136..171
FT /tag= d
FT /note= "Propeptide"
FT mat_peptide 172..1503
FT /tag= e
FT /note= "Mature Aspartyl protease-2a"
XX
XX WO200149097-A2.
XX
XX 12-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000797.
XX
XX 09-MAY-2001; 2001WO-IB000797.
XX
XX (BIEN/) BIENKOWSKI M. J.
XX (GURN/) GURNEY M. E.
XX (HEIN/) HEINRIKSON R. L.
XX (PARO/) PARODI L. A.
XX (YANR/) YAN R.
XX
XX Blenkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX
XX MPI; 2001-502548/55.
XX P-PSDB; AAU07102.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Claim 98; Fig 2; 185pp; English.
XX
XX The invention relates to a novel purified polypeptide comprising a
XX fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
XX Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
XX and the fragment retain the beta-secretase activity of the mammalian Asp2
XX protein. Also included is an isoform of amyloid protein precursor (APP)
XX comprising the amino acid sequence of a APP or its fragment containing an
XX APP cleavage site recognizable by a mammalian beta-secretase, and further
XX comprising two lysine residues at the carboxyl terminus of the amino acid
XX sequence of the mammalian APP or APP fragment. The polypeptides are used
XX for assaying for modulators of beta-secretase activity, identifying
XX agents that inhibit the APP processing activity of human Asp2 aspartyl
XX protease (hu-Asp2); identifying agents that modulate the activity of Asp2
XX; and for reducing cellular production of amyloid beta (Abeta) from APP.
XX Agents identified by the above methods are useful for treating
XX Alzheimer's disease; and for identifying modulators of Alzheimer's
XX (Abeta) peptide production, for use in designing therapeutics for the
XX treatment or prevention of Alzheimer's disease. Probes and primers
XX derived from APP nucleic acid sequences are useful for detecting hu-Asp
XX nucleic acids in in vitro assays and in Northern and Southern blots. The
XX present sequence represents the coding sequence of human Asp-2a used in
XX the methods of the invention
XX
XX Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAS11702 ..
XX
XX Alignment segment 1/1: (+)
XX
XX Matching length: 104.00 Bscore: 35.9
XX Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
XX Total Percent Similarity: 100.00 Total Percent Identity: 100.00
XX
XX Gaps: 0
XX
XX Alignment:
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```
22 ThrGlnHsGIyYlIeArgLeuProLeuArgSerGlyLeuGlyGlyAlaPr 38
|||||
64 ACCGACGACGCGATCCGCGTCCCTGCGCAGCGGCTGGGGGCGGCCCC 113
|||||
38 oLeuGlyLeu
|||||
114 CTTGGGGCTG 123
|||||

Sequence name: rngp2ndb:AMD17865
Sequence documentation:
ID AAD17865 standard; cDNA; 2070 BP.
XX
XX AAD17865;
XX
XX 10-DEC-2001 (first entry)
XX
XX Human aspartyl protease 2(a) [hu-Asp2(a)] cDNA.
XX
XX Human; aspartyl protease 2(a); Asp2(a); amyloid precursor protein; APP;
XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
XX amyloid plaque; neuronal loss; proteolytic; nootropic; neuroprotective;
XX chromosome 11q23.3-24.1; ss.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX CDS 1..1506
XX /tag= a
XX /product= "Human aspartyl protease 2(a)"
XX
XX sig_peptide 1..63
XX /tag= b
XX mat_peptide 64..1503
XX /tag= c
XX /product= "Mature human aspartyl protease 2(a)"
XX
XX GB2357767-A.
XX
XX 04-JUL-2001.
XX
XX 22-SEP-2000; 2000GB-00023315.
XX
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020081.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Blenkowski MJ, Gurney M;
XX
XX MPI; 2001-444208/48.
XX P-PSDB; AAE10629.
XX
XX Polypeptide comprising fragments of human aspartyl protease with amyloid
XX precursor protein processing activity and alpha-secretase activity, for
XX identifying modulators useful in treating Alzheimer's disease.
XX
XX Example 2; Fig 2; 187pp; English.
XX
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX proteins which lack transmembrane domain or amino terminal domain or
XX cytoplasmic domain and retains alpha-secretase activity and amyloid
XX protein precursor (APP) processing activity. The proteins of the
XX invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX activity, where modulators that increase hu-Asp1 alpha-secretase activity
XX are useful for treating Alzheimer's disease (AD) which causes progressive
XX dementia with consequent formation of amyloid plaques, neurofibrillary
XX tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
```

CC with the substrate under acidic conditions and determining the level of  
 CC hu-Appl proteolytic activity. The present sequence is a cDNA encoding  
 CC long form of human Asp2 protein, designated as Asp2(a). Asp2 gene is  
 CC localised on chromosome 11q23.3-24.1  
 XX  
 SQ Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD17865 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

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22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCARTCGGCTGCCCTGCCGACGCGCTGGGGGGGCCCC 113
38 OLeuGlyLeu
|||||
114 CTGGGGGCTG 123

```

Sequence name: rmp2ndb: AAD13021

Sequence documentation:

ID AAD13021 standard; cDNA; 2070 BP.

XX AAD13021;

DT 23-OCT-2001 (first entry)

XX Human aspartyl protease 2a (Hu-Asp2a) cDNA.

XX Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;  
 KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;  
 KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;  
 KW neuroprotective; antisense therapy; gene therapy;  
 XX chromosome 11q23.3-24.1; ss.

OS Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1506 /\*tag= a

FT sig\_peptide 1..63 /product= "Human aspartyl protease 2a (Hu-Asp2a)"

FT mat\_peptide 64..1503 /\*tag= b

FT /product= "Mature human aspartyl protease 2a (Hu-Asp2a)"

XX WO200150829-A2.

XX 19-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000799.

XX 09-MAY-2001; 2001WO-IB000799.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Bienkowski MJ, Gurney ME, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2001-483072/52.

DR P-PSDB; AAE06859.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl  
 FT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 XX activity.

XX Claim 98; Fig 2; 185pp; English.

XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid  
 CC precursor protein (APP) isoforms and their corresponding DNA molecules.  
 CC Human aspartyl proteases can act as beta-secretase proteases useful for  
 CC treating Alzheimer's disease. APP isoforms are useful for identifying  
 CC modulators of amyloid-beta peptide production, for use in designing  
 CC therapeutics for the treatment and prevention of Alzheimer's disease,  
 CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis  
 CC and neuronal loss. APP isoforms are also used in methods for identifying  
 CC inhibitors and modulators of human Asp2 activity. The invention relates  
 CC to a method for identifying agents that modulate the activity of human  
 CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
 CC as a means to screen in cellular assays for the inhibitors of beta- and  
 CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in  
 CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
 CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.  
 CC The present cDNA sequence encodes human aspartyl protease 2 (Hu-Asp2), a  
 CC 'long' form designated as (Hu-Asp2a). Hu-Asp 2 gene is localised on  
 CC chromosome 11q23.3-24.1  
 XX  
 SQ Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13021 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```

22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGACGACGGCARTCGGCTGCCCTGCCGACGCGCTGGGGGGGCCCC 113
38 OLeuGlyLeu
|||||
114 CTGGGGGCTG 123

```

Sequence name: rmp2ndb: AAD06739

Sequence documentation:

ID AAD06739 standard; cDNA; 2070 BP.

XX AAD06739;

DT 10-AUG-2001 (first entry)

XX Human aspartyl protease 2a (Asp2a) cDNA.

XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;  
 KW Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp 2a;  
 KW beta-secretase; chromosome 11q23.3-24.1; ss.

OS Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1506 /\*tag= a

FT sig\_peptide 1..63 /product= "Human aspartyl protease 2a"

FT /\*tag= b

```
FT sig_peptide 64..135
FT /*tag= c
FT /note= "Pre-pro-peptide"
FT sig_peptide 136..171
FT /*tag= d
FT /note= "Pro-peptide"
FT mat_peptide 172..1503
FT /*tag= e
FT /product= "Human mature aspartyl protease 2a"
XX
XX WO200123533-A2.
XX
XX 05-APR-2001.
XX
XX
XX 22-SEP-2000; 2000WO-US026080.
XX
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHNA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney M, Bienkowski MJ;
XX
XX WPI; 2001-290516/30.
XX P-PSDB; AAE02581.
XX
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX protein, useful for the treatment of Alzheimer's disease.
XX
XX Example 2; Page 126-127; 189pp; English.
XX
XX The present invention relates to enzymes for cleaving the alpha-
XX secretase site of the amyloid precursor protein (APP) and methods of
XX identifying those enzymes. The methods may be used to identify enzymes
XX that may be used to cleave the alpha-secretase cleavage site of the APP
XX protein. The enzymes may be used to treat or modulate the progress of
XX Alzheimer's disease. The present sequence is human aspartyl protease
XX (APP) 2a cDNA. Asp 2a has beta-secretase protease activity. Asp2 gene is
XX located on chromosome 11q23.3-24.1
XX
XX Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD06739 ..
XX
XX Alignment segment 1/1: (+)
XX
XX Quality: 104.00
XX Matching length: 20
XX Matching Percent Similarity: 100.00
XX Matching Percent Identity: 100.00
XX Total length: 35.9
XX Total Percent Similarity: 100.00
XX Total Percent Identity: 100.00
XX Gaps: 0
XX
XX Alignment:
XX
XX 22 ThrGlnHISGLYIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
XX |||||||||
XX 64 ACCCGACACGGCATCCGGCTGCCCTGGCGACGGGCGGCGGCC 113
XX |||||||||
XX 38 OleuGlyLeu 41
XX |||||||||
XX 114 CCGGGGGGCTG 123
XX
XX Sequence name: rngp2nrb:AA511517
XX
XX Sequence documentation:
XX ID AA511517 standard; cDNA; 2070 BP.
XX
XX AC AA511517;
XX
XX DT 24-OCT-2001 (first entry)
XX
```

```
DE Human cDNA encoding Aspartyl protease 2(a), Asp2(a).
XX
XX Human; Aspartyl protease; Asp2(a); beta-secretase; neurotropic;
XX neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
XX amyloid-beta; Abeta; ss.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX CDS 1..1506
XX FT /*tag= a
XX FT /product= "Asp2(a)"
XX
XX sig_peptide 1..63
XX FT /*tag= b
XX FT 64..135
XX FT /*tag= c
XX FT /label= Pre_pro_peptide
XX sig_peptide 136..171
XX FT /*tag= d
XX FT /label= Pro_peptide
XX mat_peptide 172..1503
XX FT /*tag= e
XX FT /label= Mature_Asp2(a)
XX
XX WO200149098-A2.
XX
XX 12-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000798.
XX
XX 09-MAY-2001; 2001WO-IB000798.
XX
XX 09-MAY-2001; 2001WO-IB000798.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-502549/55.
XX F-PSDB; AAU06603.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Claim 98; Fig 2; 185pp; English.
XX
XX The invention relates to a purified polypeptide comprising a fragment of
XX mammalian aspartyl protease (Asp2) protein which lacks the Asp2
XX transmembrane domain and the Asp2 protein, and where the polypeptide and
XX the fragment retain the beta-secretase activity of the mammalian Asp2
XX protein. The invention also details polynucleotides for the APP proteins
XX and vectors expressing them, and a polypeptide (isoform of amyloid
XX protein precursor (APP)) comprising the amino acid sequence of an APP or
XX its fragment containing an APP cleavage site recognizable by a mammalian
XX beta-secretase, and further comprising two lysine residues at the
XX carboxyl terminus of the amino acid sequence of the mammalian APP or APP
XX fragment. Also included in the invention are methods of identifying
XX modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
XX useful for treating Alzheimer's disease. APP is useful in methods for
XX identifying inhibitors or modulators of human Asp2 activity and amyloid-
XX beta (Abeta) peptide production. APP is also useful in designing
XX therapeutics for the treatment or prevention of Alzheimer's disease. APP
XX comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is
XX associated with increased levels of Abeta processing is useful in assays
XX relating the Alzheimer's research. The expression vector is useful for
XX recombinantly expressing APP. Nucleic acids that hybridize to APP
XX oligonucleotides are useful as probes or primers. The probes are useful
XX for detecting Hu-App nucleic acids in in vitro assays and in Northern and
XX Southern blots. The present sequence encodes human Asp2(a)
```

XX SQ Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11517 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

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22 ThrGlnHISGlyTLeArgLeuProLeuArgSergLYLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCGGGGCGCC 113
38 OLeuGlyLeu
114 CCTGGGCGCTG
123

```

Sequence name: rngp2ndb:ABL49914

Sequence documentation:  
ID ABL49914 standard; DNA; 2070 BP.

AC ABL49914;

DT 31-MAY-2002 (first entry)

DE Human aspartyl protease nucleotide sequence SEQ ID NO:1.

XX Beta-secretase; enzyme; cleavage site; amyloid protein precursor; APP;  
KM aspartyl protease; neuroprotective; nootropic; beta-secretase inhibitor;  
XX Alzheimer's disease; gene; ds.

OS Homo sapiens.

PN W0200206306-A2.

PD 24-JAN-2002.

XX 19-JUL-2001; 2001WO-US023035.

PR 19-JUL-2000; 2000US-0219795P.

PR 12-MAR-2001; 2001US-0275251P.

XX (PHAA ) PHARMACIA & UPJOHN CO.

PI Van R, Tomasselli AG, Gurney ME, Emmons TL, Bienkowski MJ;

PI Heintzkeon RL;

DR WPI; 2002-216995/27.

DR P-PSDB; ABB06409.

PT Novel substrates for human aspartyl protease useful for identifying

PT modulators of beta secretase activity of aspartyl protease for treating

PT Alzheimer's disease.

XX Claim 1; Page 117; 188pp; English.

XX The present invention describes an isolated peptide (I) comprising a  
CC sequence of at least four amino acids, where the peptide is a substrate  
CC for conducting aspartyl protease assays. (I) has neuroprotective and  
CC nootropic activities, and can be used as an inhibitor of beta-secretase  
CC activity. A beta-secretase modulator from the present invention can be  
CC used for inhibiting beta-secretase activity in vivo, and in the  
CC manufacture of a medication for the treatment of Alzheimer's disease.  
CC Pharmaceutical compositions from the present invention can be used for  
CC treating a disease or condition characterized by an abnormal beta-  
CC secretase activity. (I) is useful for identifying agents that modulate

CC the activity of human Asp2 aspartyl protease (Hu-Asp2). (I) is useful as  
CC a core structure to construct derivatives. ABL49914 to ABL49925 and  
CC ABB06409 to ABB06593 represent sequences used in the exemplification of  
CC the present invention

XX SQ Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL49914 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```

22 ThrGlnHISGlyTLeArgLeuProLeuArgSergLYLeuGlyAlaPr 38
64 ACCGACGACGGCATCCGGCTGCCCTGCGCAGCGGCGGGGCGCC 113
38 OLeuGlyLeu
114 CCTGGGCGCTG
123

```

Sequence name: rngp2ndb:ABL52457

Sequence documentation:  
ID ABL52457 standard; cDNA; 2070 BP.

AC ABL52457;

DT 16-JUL-2002 (first entry)

DE Human Asp-2(a) nucleotide sequence SEQ ID NO:3.

XX Human Asp-1; Asp-2; aspartyl protease; enzyme; Alzheimer's disease;

XX proteolytic; chromosome 11q23.3-24.1; gene; ss.

OS Homo sapiens.

PN GB2367060-A.

PI 27-MAR-2002.

PD 29-OCT-2001; 2001GB-00025934.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WO-US020881.

XX 13-OCT-1999; 99US-00416901.

XX 06-DEC-1999; 99US-0169232P.

XX 22-SEP-2000; 2000GB-00023315.

XX (PHAA ) PHARMACIA & UPJOHN CO.

PI Bienkowski MJ, Gurney M;

DR WPI; 2002-397167/43.

DR P-PSDB; ABB78590.

PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl

PT protease activity, e.g. for the diagnosis of Alzheimer's disease.

XX Example 2; Fig 2; 182pp; English.

XX The present invention describes a human aspartyl protease 1 (hu-Asp1)  
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,  
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
 CC (I) under acidic conditions; and (b) determining the level of hu-Asp1  
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a  
 CC nucleotide sequence that hybridizes under stringent conditions to the non  
 CC -coding strand complementary to a defined 1804 nucleotide sequence (see  
 CC AB52446) where the nucleotide sequence encodes a polypeptide having Asp1  
 CC proteolytic activity and lacks nucleotides encoding a transmembrane  
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that  
 CC hybridizes under stringent conditions to (III) (the nucleotide sequence  
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding  
 CC to amino acids 23-62 of hu-Asp1 (see AB578583)); (4) a vector (IV)  
 CC comprising (III) or (III') and (5) a host cell (V) transformed or  
 CC transduced with (III), (III') and/or (IV). The hu-Asp1 protease  
 CC substrate (I) may be used as an enzyme substrate in assays to detect  
 CC aspartyl protease activity, (II) and therefore diagnose diseases  
 CC associated with aberrant hu-Asp1 expression and activity such as  
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
 CC sequence encodes hu-Asp2(a) from the present invention

XX Sequence 2070 BP, 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AB52457 ..

Alignment segment 1/1: (+)

Matching	Quality:	104.00	Score:	35.9
Percent Length:	20		Total length:	20
Total Percent Similarity:	100.00		Matching Percent Identity:	100.00
Gaps:	0		Total Percent Identity:	100.00

Alignment:

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22  ThGlnHieGlyIleArgLeuProLeuAArgSerGlyLeuGlyAlaApr 38
    |||||
64  ACCGACGACGCGATCCGCTGCCCTCGGCGCACGCGCTCGGGGGGCGCCCC 113
    |||||
38  olLeuGlyLeu
    |||||
114 CCTGGGGGCTG
    |||||
    123
  
```

Sequence name: rngp2ndb:ADJ94315

Sequence documentation:

ID ADJ94315 standard; cDNA, 2070 BP.

XX ADJ94315;

DT 03-JUN-2004 (first entry)

DE Human cDNA encoding aspartyl protease 2a, Asp-2a.

XX Human; sex; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);  
 KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;  
 KM neurotrophic; neuroprotective; amyloid beta.

OS Homo sapiens.

XX US6706485-B1.

XX 16-MAR-2004.

PF 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 XX  
 PA (PHMA ) PHARMACIA & UPJOHN CO.  
 XX  
 PI Gunney ME, Bienkowski MJ, Heintzson RL, Parodi LA, Van R;  
 XX WPI, 2004-236722/22.  
 DR P-PSDB; ADJ94316.  
 XX

PT Identifying agents that modulate activity of Asp2 aspartyl protease  
 PT useful for treating or preventing Alzheimer's disease involves comparing  
 PT APP processing activity of protease in presence and absence of test  
 PT agent.

PS Example 2; SEQ ID NO 3; 109pp; English.

XX The invention relates to identifying agents that modulate activity of  
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 CC precursor protein (APP) in the presence and absence of a test agent,  
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 CC nucleic acid encoding hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing hu-Asp polypeptide, an isolated  
 CC antibody that specifically binds to hu-Asp polypeptides, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP) where the  
 CC last 2 carboxy terminus amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw  
 CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the activity  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease. Preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease of  
 CC the invention.

XX Sequence 2070 BP, 476 A; 582 C; 563 G; 449 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94315 ..

Alignment segment 1/1: (+)

Matching	Quality:	104.00	Score:	35.9
Percent Length:	20		Total length:	20
Total Percent Similarity:	100.00		Matching Percent Identity:	100.00
Gaps:	0		Total Percent Identity:	100.00

Alignment:

```

22  ThGlnHieGlyIleArgLeuProLeuAArgSerGlyLeuGlyAlaApr 38
    |||||
64  ACCGACGACGCGATCCGCTGCCCTCGGCGCACGCGCTCGGGGGGCGCCCC 113
    |||||
38  olLeuGlyLeu
    |||||
114 CCTGGGGGCTG
    |||||
    123
  
```

Sequence name: rngp2ndb:ADOS0411

Sequence documentation:

ID ADOS0411 standard; cDNA, 2070 BP.

XX ADOS0411;

```
XX
DT 29-JUL-2004 (first entry)
XX
XX Human aspartyl protease (Asp-2(a) cDNA.
XX
XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
XX Alzheimer's disease; gene therapy; human; gene; chromosome 11q23.3-24.1;
XX ss.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX FH 1..1506
XX CDS /*tag= b
XX FT /product= "Human Asp-2 protein"
XX FT sig_peptide 1..63
XX FT /*tag= a
XX FT mat_peptide 64..1503
XX FT /*tag= c
XX FT /product= "Human mature Asp-2 protein"
XX
XX US6737510-B1.
XX
XX 18-MAY-2004.
XX
XX 12-APR-2000; 2000US-00548373.
XX
XX 24-SEP-1998; 98US-0101594P.
XX PR 23-SEP-1999; 99US-00404133.
XX PR 23-SEP-1999; 99US-0155493P.
XX PR 23-SEP-1999; 99WO-US020881.
XX PR 13-OCT-1999; 99US-00416901.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX
XX WPI: 2004-387112/36.
XX DR P-PSDB; ADO50412.
XX
XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
XX PT involved in processing amyloid precursor protein into amyloid beta,
XX PT useful in preparing a composition for treating or preventing Alzheimer's
XX PT disease.
XX
XX Example 2; SEQ ID NO 3; 108pp; English.
XX
XX The invention relates to a method for identifying an agent that decreases
XX CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
XX CC provides enzyme and enzymatic procedures for cleaving the beta secretase
XX CC cleavage site of the amyloid precursor protein (APP). The invention is
XX CC useful in preparing a composition for treating or preventing Alzheimer's
XX CC disease. It is also useful in gene therapy. The present sequence is human
XX CC Asp-2 cDNA. Human Asp-2 gene is located at chromosome 11q23.3-24.1. This
XX CC sequence is used to illustrate the method of the invention.
XX
XX Sequence 2070 BP; 476 A; 582 C; 563 G; 449 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x ADO50411 ..
XX
XX Alignment segment 1/1: (+)
XX
XX Matching Length: 104.00 Total Length: 35.9
XX Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
XX Total Percent Similarity: 100.00 Total Percent Identity: 100.00
XX
XX Gaps: 0
XX
XX Alignment:
XX
XX 22 ThrGlnHISGlyIleArgLeuProLeuArgSerGlyLeuGlyIleAlaBr 38
XX |||||
XX 64 ACCGAGCAGCGCATCCGGCTGCCCTGCGCAGCGCGCTGGGGGGCCCC 113
```

```
38 oLeuGlyLeu
|||
114 CTGGGGCTG
123
Sequence name: rng2ndb:ADR75324
Sequence documentation:
ID ADR75324 standard; cDNA; 2070 BP.
XX
XX ADR75324;
XX
XX 18-NOV-2004 (first entry)
XX
XX Human aspartyl protease (Asp-2(a) cDNA.
XX
XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;
XX KM chromosome identification; Alzheimer's disease; human; gene; ss.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX FH 1..1506
XX CDS /*tag= b
XX FT /product= "Human Asp-2 protein"
XX FT sig_peptide 1..63
XX FT /*tag= a
XX FT mat_peptide 64..1503
XX FT /*tag= c
XX FT /product= "Human mature Asp-2 protein"
XX
XX US2004166507-A1.
XX
XX 26-AUG-2004.
XX
XX 29-AUG-2003; 2003US-00652045.
XX
XX 24-SEP-1998; 98US-0101594P.
XX PR 23-SEP-1999; 99US-00404133.
XX PR 23-SEP-1999; 99US-0155493P.
XX PR 13-OCT-1999; 99US-00416901.
XX
XX (GURN/) GURNEY M E.
XX PA (BIEN/) BIENKOWSKI M J.
XX PA (HEIN/) HEINRICHSON R L.
XX PA (PARO/) PARODI L A.
XX PA (YANR/) YAN R.
XX
XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;
XX
XX WPI: 2004-624916/60.
XX DR P-PSDB; ADR75325.
XX
XX Novel purified/isolated polynucleotide encoding polypeptide having
XX PT aspartyl protease activity involved in processing amyloid precursor
XX PT protein into amyloid beta, useful in identifying agent decreasing
XX PT activity of aspartyl protease.
XX
XX Claim 1; SEQ ID NO 3; 107pp; English.
XX
XX The invention relates to nucleic acid sequences encoding aspartyl
XX CC protease (Asp) polypeptides having aspartyl protease activity involved in
XX CC processing amyloid precursor protein (APP) into amyloid beta. The
XX CC invention also relates to a method for identifying an agent that
XX CC decreases the protease activity of the Asp. Asp DNA is useful in
XX CC chromosome identification as they can hybridise with a specific location
XX CC on a human chromosome and in identifying the relationship between genes
XX CC and diseases (particular gene responsible for causing diseases). It is
XX CC also useful for identifying candidates to modulate the progression of
XX CC Alzheimer's disease. Asp is useful in raising antibodies that are useful
XX CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The
XX CC present sequence is the human Asp-2(a) cDNA. This sequence is used to
XX CC illustrate the method of the invention.
```

XX Sequence 2070 BP; 476 A; 582 C; 563 G; 449 T; 0 U; 0 Other;  
SQ Alignment of: us-10-726-967a-1 x ADR75324 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	35.9
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrglHhlglylleargleuProleuArgSerclyleuGlyAla1Apr 38
|||||
64 ACCCAGCAGCGCATCCGGCTGCGCGCAGCGCCTGGGGGGCGCCCC 113
|||||
38 oLeuGlyLeu
|||||
114 CCGGGGGCTG 123
```

Sequence name: rngp2ndb:AAA59551

Sequence documentation:  
ID AAA59551 standard; DNA; 2348 BP.

AC AAA59551;

DT 14-NOV-2000 (first entry)

DE DNA encoding a human beta-secretase enzyme.

KM Beta-secretase; beta-amyloid precursor protein; beta-amyloid peptide;  
KW amyloid plaque component; Alzheimer's disease; amyloidogenic disease;  
inhibitor; ss.

OS Homo sapiens.

XX Key Location/Qualifiers

FT CDS 306..1811

FT /\*tag= a

FT /product= "beta-secretase"

XX W0200047618-A2.

PD 17-AUG-2000.

PF 10-FEB-2000; 2000MO-US003819.

PR 10-FEB-1999; 99US-0119571P.

PR 15-JUN-1999; 99US-0139172P.

PA (ELAN-) ELAN PHARM INC.

PI Anderson JP, Bast G, Doane MT, Frigon N, John V, Power M;

PI Simha S, Tatsuno G, Tung J, Wang S, Mcconlogue L;

DR P-PSDB; AAB07896.

XX Purified beta-secretase protein used in assays to discover inhibitors

XX PT which can be used for the treatment of amyloidogenic diseases e.g.

XX PT Alzheimer's disease.

XX Disclosure; Fig 1B; 121p; English.

CC mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-  
CC like pathology to test if they maintain or improve cognitive ability or  
CC reduce the plaque burden. The compounds are used for the treatment of  
CC amyloidogenic diseases e.g. Alzheimer's disease. The present sequence  
CC encodes a human beta-secretase enzyme

SQ Sequence 2348 BP; 489 A; 713 C; 661 G; 484 T; 0 U; 1 Other;

Alignment of: us-10-726-967a-1 x AAA59551 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	36
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

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22 ThrglHhlglylleargleuProleuArgSerclyleuGlyAla1Apr 38
|||||
369 ACCCAGCAGCGCATCCGGCTGCGCGCAGCGCCTGGGGGGCGCCCC 418
|||||
38 oLeuGlyLeu
|||||
419 CCGGGGGCTG 428
```

Sequence name: rngp2ndb:AAV41696

Sequence documentation:  
ID AAV41696 standard; cDNA; 2541 BP.

AC AAV41696;

DT 26-OCT-1998 (first entry)

DE Nucleotide sequence of human ASP2 (aspartic protease 2).

KM Human; ASP2; aspartic protease 2; agonist; antagonist; immunospecific;

KW antibody; inhibition; Alzheimer's disease; cancer; proteinase;

XX prohormone processing; ss.

OS Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1506

FT /\*tag= a

FT /product= "human ASP2"

XX EP855444-A2.

PD 29-JUL-1998.

PF 27-JAN-1998; 98EP-00300573.

PR 28-JAN-1997; 97GB-00001684.

PA (SMIK ) SMITHKLINE BEECHAM PLC.

PA (SMIK ) SMITHKLINE BEECHAM CORP.

PI Powell DJ, Smith TS, Chapman CG, Murphy K;

PI WPI; 1998-389809/34.

DR P-PSDB; AAW59807.

XX New nucleic acid encoding human aspartic protease 2 - used to treat,  
XX prevent and diagnose e.g. Alzheimer's disease, cancer and prohormone  
XX processing.  
XX Claim 2; Page 6-7; 26p; English.  
XX This is the nucleotide sequence of the human ASP2 (aspartic protease 2).



CC used in the method of the invention. Agonists and antagonists for ASP2  
CC immunospecific antibodies are used to treat conditions requiring  
CC increased or decreased activity or expression of ASP2 respectively. ASP2  
CC is used to treat and diagnose e.g. Alzheimer's disease, cancer and  
CC prohormone processing and ASP2 or a fragment can be used to induce an  
CC immune response against the above conditions

XX Sequence 2541 BP; 598 A; 673 C; 675 G; 579 T; 0 U; 16 Other;

Alignment of: us-10-726-967a-1 x AAV41696 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	36
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGCGCTGGGGGCGCCCC 113
38 OLeuGlyLeu
|||||
114 CCTGGGGGCTG 123
```

Sequence name: rnp2ndb:AAS82237

Sequence documentation:

ID AAS82237 standard; cDNA; 2907 BP.

XX AAS82237;

XX 13-FEB-2002 (first entry)

XX DNA encoding novel human diagnostic protein #18041.

XX Human; chromosome mapping; gene mapping; gene therapy; forensic;

XX Food supplement; medical imaging; diagnostic; genetic disorder; ss.

XX Homo sapiens.

XX WO200175067-A2.

XX 11-OCT-2001.

XX 30-MAR-2001; 2001WO-US008631.

XX 31-MAR-2000; 2000US-00540217.

XX 23-AUG-2000; 2000US-00649167.

XX (HYSE-) HYSEQ INC.

XX Drmanac RT, Liu C, Tang YT;

XX WPI; 2001-639362/73.

XX P-PSDB; ABG18050.

XX New isolated polynucleotide and encoded polypeptides, useful in

XX PT diagnosis, forensic, gene mapping, identification of mutations

XX PT responsible for genetic disorders or other traits and to assess

XX PT biodiversity.

XX Claim 1; SEQ ID NO 18041; 103bp; English.

XX The invention relates to isolated polynucleotide (I) and polypeptide (II)

XX sequences. (I) is useful as hybridisation probes, polymerase chain

XX reaction (PCR) primers, oligomers, and for chromosome and gene mapping,

XX CC and in recombinant production of (II). The polynucleotides are also used

XX in diagnostics as expressed sequence tags for identifying expressed

CC genes. (I) is useful in gene therapy techniques to restore normal  
CC activity of (II) or to treat disease states involving (II). (II) is  
CC useful for generating antibodies against it, detecting or quantitating a  
CC polypeptide in tissue, as molecular weight markers and as a food  
CC supplement. (II) and its binding partners are useful in medical imaging  
CC of sites expressing (II). (I) and (II) are useful for treating disorders  
CC involving aberrant protein expression or biological activity. The  
CC polypeptide and polynucleotide sequences have applications in  
CC diagnostics, forensic, gene mapping, identification of mutations  
CC responsible for genetic disorders or other traits to assess biodiversity  
CC and to produce other types of data and products dependent on DNA and  
CC amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic  
CC coding sequences of the invention. Note: The sequence data for this  
CC patent did not appear in the printed specification, but was obtained in  
CC electronic format directly from WIPO at

XX ftp.wipo.int/pub/published\_pct\_sequences

XX Sequence 2907 BP; 623 A; 801 C; 811 G; 672 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS82237 ..

Alignment segment 1/1: (-)

Quality:	104.00	Score:	36
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

```
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
2844 ACCGAGCAGCGCATCCGCTGCCCTGCGCAGCGCGCTGGGGGCGCCCC 2795
38 OLeuGlyLeu
|||||
2794 CCTGGGGGCTG 2785
```

Sequence name: rnp2ndb:AAS73798

Sequence documentation:

ID AAS73798 standard; cDNA; 2914 BP.

XX AAS73798;

XX 13-FEB-2002 (first entry)

XX DNA encoding novel human diagnostic protein #9602.

XX Human; chromosome mapping; gene mapping; gene therapy; forensic;

XX Food supplement; medical imaging; diagnostic; genetic disorder; ss.

XX Homo sapiens.

XX WO200175067-A2.

XX 11-OCT-2001.

XX 30-MAR-2001; 2001WO-US008631.

XX 31-MAR-2000; 2000US-00540217.

XX 23-AUG-2000; 2000US-00649167.

XX (HYSE-) HYSEQ INC.

XX Drmanac RT, Liu C, Tang YT;

XX WPI; 2001-639362/73.

XX P-PSDB; ABG09611.

XX New isolated polynucleotide and encoded polypeptides, useful in

XX PT diagnosis, forensic, gene mapping, identification of mutations

XX PT responsible for genetic disorders or other traits and to assess

XX PT biodiversity.

XX Claim 1; SEQ ID NO 18041; 103bp; English.

XX The invention relates to isolated polynucleotide (I) and polypeptide (II)

XX sequences. (I) is useful as hybridisation probes, polymerase chain

XX reaction (PCR) primers, oligomers, and for chromosome and gene mapping,

XX CC and in recombinant production of (II). The polynucleotides are also used

XX in diagnostics as expressed sequence tags for identifying expressed

PT responsible for genetic disorders or other traits and to assess  
PT biodiversity.

PS Claim 1; SEQ ID NO 9602; 103pp; English.

CC The invention relates to isolated polynucleotide (I) and polypeptide (II)  
CC sequences. (I) is useful as hybridization probes, polymerase chain  
CC reaction (PCR) primers, oligomers, and for chromosome and gene mapping,  
CC and in recombinant production of (II). The polynucleotides are also used  
CC in diagnostics as expressed sequence tags for identifying expressed  
CC genes. (I) is useful in gene therapy techniques to restore normal  
CC activity of (II) or to treat disease states involving (II). (II) is  
CC useful for generating antibodies against it, detecting or quantitating a  
CC polypeptide in tissue, as molecular weight markers and as a food  
CC supplement. (II) and its binding partners are useful in medical imaging  
CC of sites expressing (II). (I) and (II) are useful for treating disorders  
CC involving aberrant protein expression or biological activity. The  
CC polypeptide and polynucleotide sequences have applications in  
CC diagnostics, forensic, gene mapping, identification of mutations  
CC responsible for genetic disorders or other traits to assess biodiversity  
CC and to produce other types of data and products dependent on DNA and  
CC amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic  
CC coding sequences of the invention. Note: The sequence data for this  
CC patent did not appear in the printed specification, but was obtained in  
CC electronic format directly from WIPRO at  
CC ftp.wipro.int/pub/published\_pct\_sequences

XX SQ Sequence 2914 BP; 675 A; 814 C; 801 G; 624 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS73798 ..

Alignment segment 1/1: (+)

Matching Length:	Quality:	Score:
20	104.00	36
Percent Similarity: 100.00	Total length: 20	20
Total Percent Similarity: 100.00	Matching Percent Identity: 100.00	100.00
Gaps: 0	Total Percent Identity: 100.00	

Alignment:

```

22 ThrglnhsglylleargleuproleuargserglyleuglyalaPr 38
   |||||
64 ACCGAGCAGCGGATCCGGCTCCCTGCGCAGCGGCTGGGGGGGCCCC 113
   |||||
38 Oleuglyleu 41
   |||||
114 CTTGGGGGCTG 123

```

Sequence name: rngp2ndb:AAF28101

Sequence documentation:

ID AAF28101 standard; DNA; 3252 BP.

XX AAF28101;

XX 02-APR-2001 (first entry)

XX Memapsin 2 DNA.

XX Memapsin 2; catalytic; Alzheimer's; ds.

XX Homo sapiens.

XX WO200100663-A2.

XX 04-JAN-2001.

XX 27-JUN-2000; 2000WO-US017661.

XX 28-JUN-1999; 99US-0141363P.

XX 30-NOV-1999; 99US-0168060P.

XX 25-JAN-2000; 2000US-0177836P.

PR 27-JAN-2000; 2000US-0178366P.

PR 08-JUN-2000; 2000US-0210292P.

XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.

XX Tang JUN, Lin X, Koelsch G;

XX WPI, 2001-102885/11.

XX Purified recombinant catalytically active memapsin 2, used to screen

XX inhibitors of it, which are used to treat and prevent Alzheimer's

XX disease.

XX Example 1; Page 71-72; 86pp; English.

XX The present invention relates to a purified recombinant catalytically

XX active memapsin 2. The invention may be used for isolating inhibitors

XX which are used to treat or prevent Alzheimer's disease. The invention may

XX also be used to screen for individuals more genetically prone to develop

XX Alzheimer's disease

XX SQ Sequence 3252 BP; 804 A; 863 C; 811 G; 771 T; 0 U; 3 Other;

Alignment of: us-10-726-967a-1 x AAF28101 ..

Alignment segment 1/1: (+)

Matching Length:	Quality:	Score:
20	104.00	36
Percent Similarity: 100.00	Total length: 20	20
Total Percent Similarity: 100.00	Matching Percent Identity: 100.00	100.00
Gaps: 0	Total Percent Identity: 100.00	

Alignment:

```

22 ThrglnhsglylleargleuproleuargserglyleuglyalaPr 38
   |||||
25 ACCGAGCAGCGGATCCGGCTCCCTGCGCAGCGGCTGGGGGGGCCCC 74
   |||||
38 Oleuglyleu 41
   |||||
75 CTTGGGGGCTG 84

```

Sequence name: rngp2ndb:AAF31848

Sequence documentation:

ID AAF31848 standard; cDNA; 3252 BP.

XX AAF31848;

XX 12-APR-2001 (first entry)

XX Human memapsin 2 cDNA.

XX Human; memapsin 2; neurotrophic; neuroprotective; amyloid precursor protein;

XX APP; memapsin 2 inhibitor; Alzheimer's disease; ds.

XX Homo sapiens.

XX WO200100665-A2.

XX 04-JAN-2001.

XX 27-JUN-2000; 2000WO-US017742.

XX 28-JUN-1999; 99US-0141363P.

XX 30-NOV-1999; 99US-0168060P.

XX 25-JAN-2000; 2000US-0177836P.

XX 27-JAN-2000; 2000US-0178368P.

XX 08-JUN-2000; 2000US-0210292P.

XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.

XX (UNIT ) UNIV ILLINOIS FOUND.

XX Tang JYN, Hong L, Ghosh AK;  
XX WPI; 2001-137933/14.  
DR P-PSDB; AAB6572.  
XX Novel memapsin 2 inhibitors which bind to active site of memapsin 2  
PT having 2 catalytic aspartic residues and substrate binding cleft, used to  
PT treat Alzheimer's disease by blocking amyloid precursor protein cleavage.  
XX  
XX Example 1; Page 70-71; 86pp; English.  
XX The present sequence is given in a specification relating to an inhibitor  
CC of catalytically active memapsin 2. The inhibitor binds to the memapsin 2  
CC active site, which is defined by the presence of two catalytic aspartic  
CC residues and a substrate binding cleft. The inhibitor is useful for the  
CC treatment and diagnosis of Alzheimer's disease. It is useful in screens  
CC for individuals with a genetic predisposition to Alzheimer's disease. The  
CC inhibitor is useful as a reagent for specifically binding to memapsin 2  
CC or memapsin 2 analogues and for aiding in memapsin 2 isolation,  
CC purification and characterisation  
CC  
XX Sequence 3252 BP; 804 A; 863 C; 811 G; 771 T; 0 U; 3 Other;  
Alignment of: us-10-726-967a-1 x AAF31848 ..  
Alignment segment 1/1: (+)  
Matching length: 104.00      Total length: 36  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
Gaps: 0  
Alignment:  
22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
25 ACCCAGCAGCGGCGATCCGGCTGCCCTGCGCAGCGGCGGCGCCCC 74  
38 OLeuGlyLeu 41  
75 CCTGGGCGCTG 84  
Sequence name: rngp2ndb:ABK91244  
Sequence documentation:  
ID ABK91244 standard; cDNA; 3252 BP.  
XX  
XX AC ABK91244;  
XX  
XX DT 15-NOV-2002 (first entry)  
XX  
XX DE Human cDNA encoding Memapsin 2.  
XX  
XX KM Human; ss; gene; memapsin 2; aspartic protease; beta secretase;  
KM degenerative disease; Alzheimer's disease; amyloid precursor protein;  
KM APP; neuroprotective; nootropic; inhibitor;  
KM substrate side-chain preference.  
XX  
XX OS Homo sapiens.  
XX  
XX PN WO200253594-A2.  
XX  
XX PD 11-JUL-2002.  
XX  
XX PF 28-DEC-2001; 2001WO-US050826.  
XX  
XX PR 28-DEC-2000; 2000US-0258705P.  
XX  
XX PR 14-MAR-2001; 2001US-0275756P.  
XX  
XX PA (OKLA-) OKLAHOMA MEDICAL RES FOUND.  
PA (UNITI ) UNIV ILLINOIS FOUND.

XX Tang JYN, Koelsch G, Ghosh AK;  
XX WPI; 2002-619088/66.  
DR P-PSDB; ABG78372, ABG78374.  
XX New memapsin 2 activity inhibitor useful in treatment of e.g. Alzheimer's  
PT disease.  
XX  
XX Disclosure; Fig 6; 74pp; English.  
XX  
XX The invention relates to an inhibitor of catalytically active memapsin 2  
CC (an aspartic protease which can cleave at beta secretase sites), which  
CC binds to the active site of memapsin 2 defined by the presence of two  
CC catalytic aspartic residues and substrate binding cleft. Also included is  
CC a method of determination of the substrate side-chain preference in  
CC memapsin 2 sub-sites comprising: (a) reacting a mixture of memapsin 2  
CC substrates with memapsin 2, and determining the sub-site preference of  
CC memapsin 2 by determining relative initial hydrolysis rates of the  
CC mixture of memapsin 2 substrates; or (b) preparing a combinatorial  
CC library of memapsin 2 inhibitors containing a base sequence taken from  
CC OM99-2 (Glu-Val-Asn-Leu-Ala-Ala-Glu-phe), probing the library of  
CC inhibitors with memapsin 2 which binds to several inhibitors to generate  
CC several bound memapsin 2, and detecting the bound memapsin 2 with an  
CC antibody raised to memapsin 2 and an alkaline phosphatase conjugated  
CC secondary antibody. The inhibitors may be used in the manufacture of a  
CC medicament for the treatment of Alzheimer's disease since memapsin 2 may  
CC be involved in the cleavage of amyloid precursor protein (APP), and for  
CC determining the substrate side-chain preference in memapsin 2 sub-sites.  
XX The present sequence encodes human memapsin 2  
XX  
XX Sequence 3252 BP; 804 A; 863 C; 811 G; 771 T; 0 U; 3 Other;  
Alignment of: us-10-726-967a-1 x ABK91244 ..  
Alignment segment 1/1: (+)  
Matching length: 104.00      Total length: 36  
Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00      Total Percent Identity: 100.00  
Gaps: 0  
Alignment:  
22 ThrGlnHISGlyILEArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
25 ACCCAGCAGCGGCGATCCGGCTGCCCTGCGCAGCGGCGGCGCCCC 74  
38 OLeuGlyLeu 41  
75 CCTGGGCGCTG 84  
Sequence name: rngp2ndb:ABK88641  
Sequence documentation:  
ID ABK88641 standard; cDNA; 3252 BP.  
XX  
XX AC ABK88641;  
XX  
XX DT 07-OCT-2002 (first entry)  
XX  
XX DE cDNA encoding human memapsin 2.  
XX  
XX KM Human; memapsin 2; beta secretase; aspartic protease; APP;  
KM beta-amyloid precursor protein; amyloid plaque; Alzheimer's disease;  
KM neuroprotective; nootropic; expressed sequence tag; EST; gene; ss.  
XX  
XX OS Homo sapiens.  
XX  
XX PH Key 1.1467 Location/Qualifiers  
XX CDS /\*tag= a  
XX FT

```

FT      /partial
FT      /product= "Memapsin 2"
FT      /note= "This sequence lacks a start codon"
XX
XX
XX      US2002049303-A1.
XX
XX
XX      25-APR-2002.
XX
XX
XX      28-FEB-2001; 2001US-00796264.
XX
XX
XX      28-JUN-1999; 99US-0141363P.
XX      30-NOV-1999; 99US-0168060P.
XX      25-JAN-2000; 2000US-0177836P.
XX      27-JAN-2000; 2000US-0178368P.
XX      27-JUN-2000; 2000US-00604608.
XX
XX      (TANG/) TANG J J N.
XX      (LINX/) LIN X.
XX      (KOE/) KOELSCH G.
XX      (HONG/) HONG L.
XX
XX      Tang JUN, Lin X, Koelsch G, Hong L,
XX      WPI; 2002-507280/54.
XX      P-PSDB; AAU99488.
XX
XX      New recombinant catalytically active memapsin 2, useful to screen for
XX      inhibitors of memapsin 2 which can be used to prevent and treat
XX      Alzheimer's disease.
XX
XX      Example 1; Page 20-21; 44pp; English.
XX
XX      The present invention relates to methods for the production of purified,
XX      recombinant catalytically active, memapsin 2 (beta secretase). Memapsin
XX      2, a member of the aspartic protease family, cleaves beta-amyloid
XX      precursor protein (A $\beta$ ) found in amyloid plaques. The recombinant
XX      memapsin 2 is useful for identifying inhibitors of memapsin 2 in the
XX      design of drugs for the treatment and/or prevention of Alzheimer's
XX      disease. The recombinant memapsin 2 can be used to immunize against
XX      Alzheimer's disease. The present sequence encodes human memapsin 2
XX
XX      Sequence 3252 BP; 804 A; 863 C; 811 G; 771 T; 0 U; 3 Other;
XX
XX      Alignment of: us-10-726-967a-1 x ABK88641 ..
XX
XX      Alignment segment 1/1: (+)
XX
XX      Matching length: 104.00      Total length: 36
XX      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
XX      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
XX
XX      Gaps: 0
XX
XX      Alignment:
XX
XX      22 ThrGlnHisGlyIleArgLeuProteinArgSerGlyLeuGlyValAlaPr 38
XX      25 ACCCGGCGACGGGATCGGCTGCTGCGCGACGGGCTGGGGGGCGCC 74
XX      38 OLeuGlyLeu 41
XX      75 CCTGGGGCTG 84
XX
XX      Sequence name: rngp2ndb:ABX11591
XX
XX      Sequence documentation:
XX      ID ABX11591 standard; cDNA; 3252 BP.
XX
XX      AC ABX11591;
XX
XX      01-MAY-2003 (first entry)
XX
XX      Human partial cDNA encoding memapsin 2.

```

```

XX
XX      Human; s9; memapsin 2, beta-secretase; beta-amyloid precursor protein;
XX      beta-amyloid peptide; Alzheimer's disease; neurotropic; neuroprotective.
XX
XX      Homo sapiens.
XX
XX      Key CDS
XX
XX      Location/Qualifiers
XX      1..1467
XX      /tag= a
XX      /product= "Memapsin 2"
XX      /partial
XX      /note= "No start codon shown"
XX
XX      US2002164760-A1.
XX
XX      07-NOV-2002.
XX
XX      28-FEB-2001; 2001US-00795903.
XX
XX
XX      28-JUN-1999; 99US-0141363P.
XX      30-NOV-1999; 99US-0168060P.
XX      25-JAN-2000; 2000US-0177836P.
XX      27-JAN-2000; 2000US-0178368P.
XX      08-JUN-2000; 2000US-0210292P.
XX      27-JUN-2000; 2000US-00604608.
XX
XX      (OKLA-) OKLAHOMA MEDICAL RES FOUND.
XX
XX      Lin X, Koelsch G, Tang JUN;
XX
XX      WPI; 2003-255218/25.
XX      P-PSDB; ABG76101.
XX
XX      New purified recombinant catalytically active memapsin 2 (beta-
XX      secretase), useful for designing and screening of specific inhibitors for
XX      the diagnosis, prevention and/or treatment of Alzheimer's disease.
XX
XX      Example 1; Page 20-21; 44pp; English.
XX
XX      PS
XX      The invention relates to a purified recombinant catalytically active
XX      memapsin 2, a beta-secretase which produces the beta-amyloid peptide from
XX      the beta amyloid precursor protein. Also included are producing the above
XX      memapsin 2 (comprising refolding the recombinant memapsin 2 under
XX      conditions which dissociate and then slowly refold the enzyme into a
XX      catalytically active form), isolating inhibitors of cleavage by memapsin
XX      2 (comprising adding to one or more potential inhibitors of cleavage by memapsin
XX      2 and a substrate for memapsin 2 and screening for decreased cleavage of
XX      the substrate by the inhibitors), designing or obtaining inhibitors of
XX      the memapsin 2 (comprising modelling an inhibitor based on the
XX      crystallisation coordinates of memapsin 2 or the parameters given in the
XX      specification), a database comprising binding properties and chemical
XX      structures of compounds designed or screened by the method above and
XX      treating or preventing Alzheimer's disease (comprising administering to a
XX      patient an inhibitor of memapsin 2 which binds to the active site of the
XX      memapsin 2 defined by the presence of 2 catalytic aspartic residues and
XX      substrate binding cleft or immunising an individual with the above
XX      memapsin 2 to elicit an amount of antibodies to reduce the cleavage by
XX      endogenous memapsin 2). The memapsin 2 is useful in designing and
XX      screening of specific inhibitors for the diagnosis, prevention and/or
XX      treatment of Alzheimer's disease. The present sequence encodes memapsin 2
XX
XX      Sequence 3252 BP; 804 A; 863 C; 811 G; 771 T; 0 U; 3 Other;
XX
XX      Alignment of: us-10-726-967a-1 x ABX11591 ..
XX
XX      Alignment segment 1/1: (+)
XX
XX      Matching length: 104.00      Total length: 36
XX      Matching Percent Similarity: 100.00      Matching Percent Identity: 100.00
XX      Total Percent Similarity: 100.00      Total Percent Identity: 100.00
XX
XX      Gaps: 0

```

## Alignment:

```
22  ThrGlnH1SG1Y11eArgLeuProleuArgserG1YleuG1Yg1YAlaPr 38
    |||||
25  ACCGACGACGGGATCGGCTGCCCTGGCGACGGGCGGCGGCCCC 74
    |||||
38  oLeuG1Yleu 41
    |||||
75  CCTGGGGGCTG 84
```

Sequence name: rngp2ndb:ADA74816

## Sequence documentation:

ID ADA74816 standard; cDNA; 3252 BP.

AC ADA74816;

DT 20-NOV-2003 (first entry)

DE Human memapsin 2 cDNA.

KW memapsin 2; beta-secretase; amyloid precursor protein; APP;

KW aspartic proteinase 2; ASP2; neurotrophic; neuroprotective;

KW Alzheimer's disease; human; ss; gene.

OS Homo sapiens.

FH Key Location/Qualifiers

FT CDS 1..1467

FT /tag= a

FT /partial

FT /product= "Human memapsin 2 protein"

FT /note= "No start codon"

FT US6545127-B1.

PD 08-APR-2003.

PF 27-JUN-2000; 2000US-00604608.

PR 28-JUN-1999; 99US-0141363P.

PR 30-NOV-1999; 99US-0168060P.

PR 25-JAN-2000; 2000US-0178368P.

PR 27-JAN-2000; 2000US-0178368P.

PR 08-JUN-2000; 2000US-0210282P.

PA (OKLA-) OKLAHOMA MEDICAL RES FOUND.

PI Tang JN, Lin X, Koelsch G, Hong L;

PI WPI, 2003-566587/53.

DR P-PSDB; ADA74817.

XX Novel memapsin 2 protein that cleaves a beta-secretase site of an amyloid

XX PT precursor protein is useful in the design and screening of specific

XX PT inhibitors for treating and preventing Alzheimer's disease.

XX PS Disclosure; Col 35-40; 44pp; English.

XX The invention relates to a novel method which comprises the production of

XX CC purified, catalytically active, recombinant memapsin 2 (beta-secretase)

XX CC protein where the memapsin protein is expressed in a bacterial cell and

XX CC cleaves the beta-secretase site of an amyloid precursor protein (APP).

XX CC Memapsin 2, also known as aspartic proteinase 2 (ASP2), belongs to the

XX CC aspartic protease family and demonstrates neurotrophic and neuroprotective

XX CC activities. The protein of the invention may be useful in the design and

XX CC screening of specific inhibitors which are useful in treating and

XX CC preventing Alzheimer's disease. The current sequence is that of the human

XX CC memapsin 2 cDNA of the invention.

XX SQ Sequence 3252 BP; 804 A; 863 C; 811 G; 771 T; 0 U; 3 Other;

XX Alignment of: us-10-726-967a-1 x ADA74816 ..

## Alignment segment 1/1: (+)

	Quality:	104.00	Score:	36
Matching	Length:	20	Total Length:	20
Matching	Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total	Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:		0		

## Alignment:

```
22  ThrGlnH1SG1Y11eArgLeuProleuArgserG1YleuG1Yg1YAlaPr 38
    |||||
25  ACCGACGACGGGATCGGCTGCCCTGGCGACGGGCGGCGGCCCC 74
    |||||
38  oLeuG1Yleu 41
    |||||
75  CCTGGGGGCTG 84
```

Sequence name: rngp2ndb:ADP44631

## Sequence documentation:

ID ADP44631 standard; mRNA; 5625 BP.

AC ADP44631;

DT 26-AUG-2004 (first entry)

DE Human beta-site APP cleaving enzyme type 1 transcript variant D mRNA.

KW Huntington's; spinocerebellar ataxia type 1;

KW spinocerebellar ataxia type 3; SCA; Machado-Joseph disease;

KW dentatorubral-pallidoluysian atrophy; DRPLA;

KW beta-site APP cleaving enzyme type 1; amyloid precursor protein; BACE1;

KW ASP2; memapsin2; ss; human; transcript variant D.

OS Homo sapiens.

PN W02004047872-A2.

PD 10-JUN-2004.

PF 26-NOV-2003; 2003MO-US037650.

PR 26-NOV-2002; 2002US-0429387P.

PR 03-FEB-2003; 2003US-044614P.

PA (MEDT ) MEDTRONIC INC.

PI Kaemmerer WF;

PI WPI, 2004-441106/41.

DR New medical system comprising an intracranial access device, a mapping

XX PT means, a small interfering RNA or vector encoding the RNA, and a delivery

XX PT means, useful for treating a neurodegenerative disorder.

XX PS Claim 23; SEQ ID NO 21; 228pp; English.

XX The invention relates to a novel medical system for treating a

XX CC neurodegenerative disorder comprising an intracranial access device, a

XX CC mapping means for locating a predetermined location in the brain, a

XX CC deliverable amount of a small interfering RNA (siRNA), or vector encoding

XX CC the siRNA, and a delivery means. The system of the invention has

XX CC applications related to the CNS and may be useful for treating a

XX CC neurodegenerative disorder, such as Parkinson's disease, Alzheimer's

XX CC disease, Huntington's disease, spinocerebellar ataxia (SCA) types 1 and 3

XX CC (Machado-Joseph disease) or dentatorubral-pallidoluysian atrophy (DRPLA).

XX CC The current sequence is that of the human beta-site APP (amyloid

XX CC precursor protein) cleaving enzyme type 1 (BACE1;ASP2;memapsin2)

XX CC transcript variant D mRNA of the invention.

Sequence 5625 BP; 1457 A; 1447 C; 1359 G; 0 T; 1362 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADP44631 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	36
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
510 ACCGACGACGCGCAUCCGGCUGCCCGCGACGCGCCUGGGGGGCCCC 559
38 oLeuGlyLeu
|||||
560 CUGGGGCGUG 41
569

```

Sequence name: rngp2ndb:ADP44630

Sequence documentation:

ID ADP44630 standard; mRNA; 5700 BP.

ADP44630;

26-AUG-2004 (first entry)

Human beta-site APP cleaving enzyme type 1 transcript variant C mRNA.

neurodegenerative disorder; CNS; Parkinson's disease; Alzheimer's;  
Huntington's; spinocerebellar ataxia type 1;  
spinocerebellar ataxia type 3; SCA; Machado-Joseph disease;  
dentatorubral-pallidolysian atrophy; DRPLA;  
beta-site APP cleaving enzyme type 1; amyloid precursor protein; BACE1;  
ASB2; memapsin2; ss; human; transcript variant C.

Homo sapiens.

W02004047872-A2.

10-JUN-2004.

26-NOV-2003; 2003MO-US037650.

26-NOV-2002; 2002US-0429387P.

03-FEB-2003; 2003US-0444614P.

(MEDT ) MEDTRONIC INC.

Kaemmerer WF;

WPI; 2004-441106/41.

New medical system comprising an intracranial access device, a mapping means, a small interfering RNA or vector encoding the RNA, and a delivery means, useful for treating a neurodegenerative disorder.

Claim 23; SEQ ID NO 20; 228bp; English.

The invention relates to a novel medical system for treating a neurodegenerative disorder comprising an intracranial access device, a mapping means for locating a predetermined location in the brain, a deliverable amount of a small interfering RNA (siRNA), or vector encoding the siRNA, and a delivery means. The system of the invention has applications related to the CNS and may be useful for treating a neurodegenerative disorder, such as Parkinson's disease, Alzheimer's disease, Huntington's disease, spinocerebellar ataxia (SCA) types 1 and 3 (Machado-Joseph disease) or dentatorubral-pallidolysian atrophy (DRPLA). The current sequence is that of the human beta-site APP (amyloid

CC precursor protein) cleaving enzyme type 1 (BACE1;ASB2;memapsin2)  
CC transcript variant C mRNA of the invention.

Sequence 5700 BP; 1470 A; 1476 C; 1372 G; 0 T; 1382 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADP44630 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	36
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
510 ACCGACGACGCGCAUCCGGCUGCCCGCGACGCGCCUGGGGGGCCCC 559
38 oLeuGlyLeu
|||||
560 CUGGGGCGUG 41
569

```

Sequence name: rngp2ndb:ABL39774

Sequence documentation:

ID ABL39774 standard; cDNA; 5757 BP.

ABL39774;

10-MAY-2002 (first entry)

Human NS cDNA sequence SEQ ID NO:84.

Human; cytostatic; osteopathic; gynaecological; neuroprotective;  
antithrombotic; antiarthritic; antipsoriatic; ophthalmological; anti-HIV;  
vasoregic; antiarteriosclerotic; antiinflammatory; dermatological;  
anorectic; muscular; antifertility; cardiovascular; anticoagulant;  
antifibrinolytic; hypotension; antiaesthetic; immunomodulator; cardiac;  
anticongulant; antidiabetic; tranquilizer; antidepressant; neuroleptic;  
gastrointestinal; virucide; antitumor; cerebroprotective; nootropic;  
contraceptive; vaccine; gene therapy; cancer; osteoporosis; dystonia;  
endometriosis; degenerative disease; multiple sclerosis; poriasis;  
rheumatoid arthritis; cataract; restenosis; atherosclerosis; glaucoma;  
inflammation; skin disorder; obesity; muscular dystrophy; AIDS;  
infertility; cardiovascular disease; coagulation disease; hypertension;  
ischemia; asthma; immune disease; epilepsy; angina; neurodegeneration;  
diabetes; anxiety; depression; schizophrenia; viral disease; stroke;  
gastric ulcer; Alzheimer's disease; gene; ss.

Homo sapiens.

W0200206315-A2.

24-JAN-2002.

17-JUL-2001; 2001WO-IL000653.

18-JUL-2000; 2000IL-00137345.

15-DEC-2000; 2000IL-00140354.

(COMP-) COMPUGEN LTD.

Mintz L, Freilich S, Bernstein J.

WPI; 2002-155037/20.

P-PSDB; ABB06120.

One hundred and twenty eight novel nucleic acid sequences, useful for treating and diagnosing e.g. cancer, asthma and Alzheimer's.

PS Claim 1; Page 124-126; 290pp; English.

CC ABL39691 to ABL39818 represent novel human nucleic acid sequences  
CC encoding the proteins given in ABL06037 to ABL06164. The novel sequences  
CC (NS) can have cytostatic, osteopathic, gynaecological, neuroprotective,  
CC antineumatic, antitarditic, antiparatic, ophthalmological, virucide,  
CC vasotropic, antitardiosclerotic, antineuroinflammatory, dermatological,  
CC anorectic, muscular, anti-HIV, antineurotic, cardiovascular,  
CC anticoagulant, antifibrinolytic, hypotension, antiautomatic, cardiant,  
CC immunomodulator, anticonvulsant, antidiabetic, tranquilizer, antitumor,  
CC antidepressant, gastroenteric, neuroleptic, cerebroprotective,  
CC nocotropic and contraceptive activities. The NS can be used in vaccines,  
CC gene therapy and antisense therapy. Nucleic acids, expression vectors and  
CC antibodies from the present invention can be used for treating and  
CC diagnosing e.g. cancer, osteoporosis, endometriosis, degenerative  
CC diseases, dystonia, multiple sclerosis, rheumatoid arthritis, psoriasis,  
CC cataracts, restenosis, atherosclerosis, inflammation, skin disorders,  
CC glaucoma, obesity, muscular dystrophy, AIDS, infertility, cardiovascular  
CC disease, coagulation disease, ischemia, hypertension, asthma, immune  
CC disease, epilepsy, angina, neurodegeneration, diabetes, anxiety,  
CC depression, schizophrenia, viral disease, gastric ulcers, stroke,  
CC Alzheimer's disease and as a contraceptive

SQ Sequence 5757 BP; 1485 A; 1490 C; 1392 G; 1388 T; 0 U; 2 Other;

Alignment of: us-10-726-967a-1 x ABL39774 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	36
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnH1gIy11eArgLeuProLeuArgSerG1yLeuG1yAlaPr 38  
|||||  
518 ACCCGAGCAGCGCATCCGCTGCGCGCAGCGGCTGGGCGGCCCC 567  
38 OLeuG1yLeu 41  
|||||  
568 CTTGGGGGCTG 577

Sequence name: rmp2ndb:ADP44629

Sequence documentation:  
ID ADP44629 standard; mRNA; 5757 BP.

AC ADP44629;  
DT 26-AUG-2004 (first entry)

DE Human beta-site APP cleaving enzyme type 1 transcript variant B mRNA.

XX neurodegenerative disorder; CNS; Parkinson's disease; Alzheimer's;  
XX Huntington's; spinocerebellar ataxia type 1;  
XX spinocerebellar ataxia type 3; SCA; Machado-Joseph disease;  
XX dentatorubral-pallidoluysian atrophy; DRPLA;  
XX beta-site APP cleaving enzyme type 1; amyloid precursor protein; BACE1;  
XX ASP2; memapsin2; ss; human; transcript variant B.

OS Homo sapiens.  
XX  
XX WO2004047872-A2.  
XX  
XX 10-JUN-2004.  
XX  
XX 26-NOV-2003; 2003WO-US037650.  
XX  
XX 26-NOV-2003; 2002US-0429387P.  
XX  
XX 03-FEB-2003; 2003US-0444614P.  
PR

XX (MEDT) MEDTRONIC INC.  
PA  
XX Kaemmerer WF;  
PI  
XX WPI; 2004-44106/41.  
DR  
XX  
XX  
PT New medical system comprising an intracranial access device, a mapping  
PT means, a small interfering RNA or vector encoding the RNA, and a delivery  
PT means, useful for treating a neurodegenerative disorder.

PS Claim 23; SEQ ID NO 19; 228pp; English.

XX The invention relates to a novel medical system for treating a  
CC neurodegenerative disorder comprising an intracranial access device, a  
CC mapping means for locating a predetermined location in the brain, a  
CC deliverable amount of a small interfering RNA (siRNA), or vector encoding  
CC the siRNA, and a delivery means. The system of the invention has  
CC applications related to the CNS and may be useful for treating a  
CC neurodegenerative disorder, such as Parkinson's disease, Alzheimer's  
CC disease, Huntington's disease, spinocerebellar ataxia (SCA) types 1 and 3  
CC (Machado-Joseph disease) or dentatorubral-pallidoluysian atrophy (DRPLA).  
CC The current sequence is that of the human beta-site APP (amyloid  
CC precursor protein) cleaving enzyme type 1 (BACE1, ASP2; memapsin2)  
CC transcript variant B mRNA of the invention.

SQ Sequence 5757 BP; 1487 A; 1488 C; 1392 G; 0 T; 1390 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADP44629 ..

Alignment segment 1/1: (+)

Quality:	104.00	Score:	36
Matching length:	20	Total length:	20
Matching Percent Similarity:	100.00	Matching Percent Identity:	100.00
Total Percent Similarity:	100.00	Total Percent Identity:	100.00
Gaps:	0		

Alignment:

22 ThrGlnH1gIy11eArgLeuProLeuArgSerG1yLeuG1yAlaPr 38  
|||||  
510 ACCCGAGCAGCGCAUCCGGCUGCCCGCGCAGCGGCGGGGGGCCCC 559  
38 OLeuG1yLeu 41  
|||||  
560 CCGGGGGGCTG 569

Sequence name: rmp2ndb:ADP44628

Sequence documentation:  
ID ADP44628 standard; mRNA; 5832 BP.

AC ADP44628;  
DT 26-AUG-2004 (first entry)

DE Human beta-site APP cleaving enzyme type 1 transcript variant A mRNA.

XX neurodegenerative disorder; CNS; Parkinson's disease; Alzheimer's;  
XX Huntington's; spinocerebellar ataxia type 1;  
XX spinocerebellar ataxia type 3; SCA; Machado-Joseph disease;  
XX dentatorubral-pallidoluysian atrophy; DRPLA;  
XX beta-site APP cleaving enzyme type 1; amyloid precursor protein; BACE1;  
XX ASP2; memapsin2; ss; human; transcript variant A.

OS Homo sapiens.  
XX  
XX WO2004047872-A2.  
XX  
XX 10-JUN-2004.  
XX  
XX 26-NOV-2003; 2003WO-US037650.  
XX  
XX





XX	US2003224512-A1.	PN
XX	04-DEC-2003.	PD
XX	31-MAY-2002; 2002US-00159942.	PF
XX	31-MAY-2002; 2002US-00159942.	PR
XX	(ISIS-) ISIS PHARM INC.	PA
XX	Dobie KW;	PI
XX	WPI; 2004-051909/05.	DR
XX	P-PSDB; ADG86751.	DR
XX	New antisense compound targeted to a nucleic acid molecule encoding a beta-site amyloid precursor protein (APP)-cleaving enzyme, useful for treating diseases associated with beta-site APP-cleaving enzyme, e.g. neurodegeneration.	PT
XX	Example 13; SEQ ID NO 4; 58pp; English.	PS
XX	The invention relates to a compound targeted to a nucleic acid molecule encoding a beta-site amyloid precursor protein (APP)-cleaving enzyme. The antisense oligonucleotides and compounds are useful for inhibiting the expression of beta-site amyloid precursor protein (APP)-cleaving enzyme, modulating amyloid deposition in neurons, altering the expression of a splice variant of beta-site APP-cleaving enzyme, and for treating diseases or conditions associated with expression of beta-site APP-cleaving enzyme e.g. neurodegeneration or Alzheimer's disease. The antisense compounds are also useful as research reagents and kits, or in diagnostic, therapeutic and prophylaxis applications, e.g. to prevent or delay infection, inflammation or tumour formation. The present sequence represents a human APP-cleaving enzyme DNA.	CC
XX	Sequence 5878 BP; 1547 A; 1518 C; 1405 G; 1408 T; 0 U; 0 Other;	SO
XX	Alignment of: ua-10-726-967a-1 x ADG86621 ..	SO
XX	Alignment segment 1/1: (+)	SO
XX	Quality: 104.00	SO
XX	Matching length: 20	SO
XX	Matching Percent Similarity: 100.00	SO
XX	Total Percent Similarity: 100.00	SO
XX	Gaps: 0	SO
XX	Score: 36	SO
XX	Total length: 20	SO
XX	Matching Percent Identity: 100.00	SO
XX	Total Percent Identity: 100.00	SO
XX	Alignment:	SO
XX	22 ThrGlnHisGlyYllEArgLeuProLeuArgSerCtyLeuGlyValAlaP 38	SO
XX	518 ACCGACGACGGGACATCCGGCTGCCCCCTGGCGACGCGGCTGGGGGACGCCCC 567	SO
XX	38 OLeuGlyLeu	SO
XX		SO
XX	568 CCTGGGGGCTG	SO
XX	41	SO
XX	577	SO
XX	Sequence name: mrnp2ndb:ADQ17467	SO
XX	Sequence documentation:	SO
XX	ID ADQ17467 standard; DNA; 5878 BP.	SO
XX	AC ADQ17467;	SO
XX	DT 26-AUG-2004 (first entry)	SO
XX	DE Human soft tissue sarcoma-upregulated DNA - SEQ ID 284.	SO
XX	KW soft tissue sarcoma; cytostatic; gene therapy; vaccine; screening; human; de.	SO
XX	OS Homo sapiens.	SO

```

XX MN WO2004048938-A2.
XX PD 10-JUN-2004.
XX XX
XX PP 26-NOV-2003; 2003WO-US038193.
XX XX
XX PR 26-NOV-2002; 2002US-0429739P.
XX XX
XX PA (PROT-) PROTEIN DESIGN LABS INC.
XX PI
XX AZ Aziz N, Gineburg WM, Zlotnick A;
XX DR WPI; 2004-441208/41.
XX XX
XX PT Early detection of soft tissue sarcoma comprises determining expression
XX PT of a gene in a first soft tissue sample and a normal soft tissue sample
XX PT and comparing the gene expression, also useful in treating soft tissue
XX PT sarcoma.
XX XX
XX PS Example 2; SEQ ID NO 284; 210bp; English.
XX XX
XX CC The invention relates to a novel method for detecting soft tissue sarcoma
XX CC which comprises obtaining a first soft tissue sample from an individual
XX CC and a normal soft tissue sample from the same or different individual,
XX CC determining the expression of a gene in both samples and comparing the
XX CC expression of the gene in both soft tissue samples, where a higher level
XX CC of protein expression in the first soft tissue sample indicates the
XX CC presence of soft tissue sarcoma. The method of the invention has
XX CC cyrostatic applications and may be useful for detecting soft tissue
XX CC sarcoma, possibly via gene therapy or vaccine production. The nucleic
XX CC acid sequences may be useful in diagnostic and screening applications.
XX CC The current sequence is that of a human soft tissue sarcoma-upregulated
XX CC DNA of the invention. The current sequence is not shown within the
XX CC specification per se but was submitted in CD format by the inventor.
XX XX
SQ Sequence 5878 BP; 1547 A; 1518 C; 1405 G; 1408 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADQ17467 ..

Alignment segment 1/1: (+)

Quality: 104.00 Score: 36
Matching length: 20 Total length: 20
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00
Total Percent Similarity: 100.00 Total Percent Identity: 100.00
Gaps: 0

Alignment:
22 ThrGlnHisGlyIleArgLeuProLeuAArgSerGlyLeuGlyValAaPr 38
518 ACCCGACGACGGGCATCCGGCTGCCCTTCGCGACGGCCTGGGGGGCCCCC 567
38 oLeuGlyLeu 41
|||||
568 CCTGGGGGCTG 577

Sequence name: rmgp2ndb:AAA59553

Sequence documentation:
ID AAA59553 standard; DNA; 16080 BP.
XX
XX AA59553;
XX AC
XX DT 14-NOV-2000 (first entry)
XX XX
XX DB DNA clone pCEK Cl.27 encoding a human beta-secretase enzyme.
XX XX
XX KW Beta-secretase; beta-amyloid precursor protein; beta-amyloid peptide;
XX KM amyloid plaque component; Alzheimer's disease; amyloidogenic disease;
XX inhibitor; 88.
XX DS Homo sapiens.

```

XX MO200047618-A2.  
XX 17-AUG-2000.  
XX 10-FEB-2000; 2000WO-US003819.  
XX 10-FEB-1999; 99US-0119571P.  
XX 15-JUN-1999; 99US-0139172P.  
XX (ELAN-) ELAN PHARM INC.  
XX Anderson JP, Basl G, Doane MT, Frigon N, John V, Power M;  
XX Slnha S, Taleuno G, Tung J, Wang S, Mcconlogue L;  
XX WPI; 2000-533011/48.  
XX Purified beta-secretase protein used in assays to discover inhibitors  
XX PT which can be used for the treatment of amyloidogenic diseases e.g.  
XX Alzheimer's disease.  
XX PS Disclosure; Fig 13A-E; 121pp; English.  
XX The specification describes a beta-secretase enzyme. The enzyme cleaves  
XX CC beta-amyloid precursor protein to produce beta-amyloid peptide. This  
XX CC enzyme is therefore implicated in the production of amyloid plaque  
XX CC components which accumulate in the brains of individuals afflicted with  
XX CC Alzheimer's disease. Inhibitors of beta-secretase are administered to a  
XX CC mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-  
XX CC like pathology to test if they maintain or improve cognitive ability or  
XX CC reduce the plaque burden. The compounds are used for the treatment of  
XX CC amyloidogenic diseases e.g. Alzheimer's disease. The present sequence  
XX encodes a human beta-secretase enzyme  
SQ Sequence 16080 BP; 3627 A; 4556 C; 3962 G; 3913 T; 0 U; 22 Other;  
Alignment of: us-10-726-967a-1 x AAA59553 ..  
Alignment segment 1/1: (+)  
Matching length: 104.00 Total length: 36.1  
Matching Percent Similarity: 100.00 Matching Percent Identity: 100.00  
Total Percent Similarity: 100.00 Total Percent Identity: 100.00  
Gaps: 0  
Alignment:  
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
1738 ACCGACGACGGCATCCGGCTGCCCTCGCGACGGCGGCGGCGCCCC 1787  
38 OLeuGlyLeu 41  
1788 CCTGGGCGCTG 1797  
Sequence name: rmp2ndb:AAA28280  
Sequence documentation:  
ID AAA28280 standard; cDNA; 1503 BP.  
XX  
XX AAA28280;  
XX  
XX 12-FEB-2001 (first entry)  
XX  
XX DE Rat cDNA encoding beta-secretase.  
XX  
XX KM Beta-secretase; enzyme; amyloid plaque; Alzheimer's disease; rat;  
XX KM Down's syndrome; amyloid angiopathy; gene therapy; neuroprotective; ss.  
XX Rattus sp.  
XX  
XX FH Key Location/Qualifiers

FT CDS 1. 1503  
FT /tag= a  
FT /product= "beta secretase"  
FT /note= "No stop codon given"  
XX  
XX MO200058479-A1.  
XX 05-OCT-2000.  
XX 23-MAR-2000; 2000WO-US007755.  
XX 26-MAR-1999; 99US-00277229.  
XX (AMGEN-) AMGEN INC.  
XX Citron M, Vassar RJ, Bennett BD;  
XX WPI; 2000-594643/56.  
XX P-PsDB; AAY94769.  
XX  
XX Isolated beta-secretase nucleic acids and encoded polypeptides, useful  
XX PT for diagnosis and gene therapy of Alzheimer's disease.  
XX  
XX PS Claim 1; Fig 3; 145pp; English.  
XX  
XX This invention relates to 3 nucleotide sequences encoding beta-secretase  
XX CC protein. Beta-secretase is an enzyme involved in the production of one  
XX CC of the components of amyloid plaques involved in Alzheimer's disease. The  
XX CC invention includes an expression vector comprising the nucleotide  
XX CC sequence, a host cell comprising the expression vector, and a process for  
XX CC producing the protein through culturing the transformed cells. Also  
XX CC included in the invention are a polypeptide derivative of the beta-  
XX CC secretase protein, a fusion protein comprising beta-secretase fused to a  
XX CC heterologous amino acid sequence, and a method for modulating the levels  
XX CC of beta-secretase polypeptide in a mammal comprising administering the  
XX CC polynucleotide sequence. Beta-secretase exhibits neuroprotective and  
XX CC neurotrophic activity. The beta-secretase nucleotide sequence may be used to  
XX CC map locations of the beta-secretase gene and related genes on chromosomes  
XX CC and as hybridization probes in diagnostic assays to test for the presence  
XX CC of beta-secretase DNA or RNA, such as in Alzheimer's disease, Down's  
XX CC syndrome, and amyloid angiopathy. The nucleotide sequence may also be  
XX CC used as anti-sense inhibitors of beta-secretase expression, in gene  
XX CC therapy of Alzheimer's disease, and for the identification of compounds  
XX CC that modulate beta-secretase activity. Antibodies to the beta-secretase  
XX CC protein may be used for in vitro and in vivo diagnostic purposes to  
XX CC detect the presence of beta-secretase polypeptide in a body fluid or cell  
XX CC sample. The present sequence represents rat cDNA encoding beta-secretase  
SQ Sequence 1503 BP; 324 A; 428 C; 419 G; 332 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x AAA28280 ..  
Alignment segment 1/1: (+)  
Matching length: 77.00 Total length: 89.5  
Matching Percent Similarity: 90.00 Matching Percent Identity: 80.00  
Total Percent Similarity: 90.00 Total Percent Identity: 80.00  
Gaps: 0  
Alignment:  
22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyAlaPr 38  
64 ACCCATCTCGGATCCGACTGCCCTTCGACGCGGCGCTGCGGCCACC 113  
38 OLeuGlyLeu 41  
114 CCTGGGCGCTG 123  
Sequence name: rmp2ndb:AAA28279  
Sequence documentation:

ID	AA28279	standard; cDNA; 1503 BP.
XX		
AC	AAA28279;	
XX		
DT	12-FEB-2001	(first entry)
XX		
DE	Murine cDNA encoding beta-secretase.	
XX		
KM	Beta-secretase; enzyme; amyloid plaque; Alzheimer's disease; mouse;	
XX	Down's syndrome; amyloid angiopathy; gene therapy; neuroprotective; ss.	
OS		
XX		
XX	Mus sp.	
XX		
FT	Key	Location/Qualifiers
FT	CDS	1..1503
FT		/*tag=a
FT		/product="Beta secretase"
FT		/note="No stop codon given"
XX		
PN	WO200058479-A1.	
XX		
PD	05-OCT-2000.	
XX		
PF	23-MAR-2000; 2000WO-US007755.	
XX		
PR	26-MAR-1999; 99US-00277229.	
XX		
PA	(AMGE-) AMGEN INC.	
PI	Citron M, Vassar RJ, Bennett BD;	
XX		
DR	WPI; 2000-594643/56.	
XX		
XX	P-PSDB; AAY94768.	
PT	Isolated beta-secretase nucleic acids and encoded polypeptides, useful	
PT	for diagnosis and gene therapy of Alzheimer's disease.	
PS	Claim 1; Fig 2; 145pp; English.	
XX		
CC	This invention relates to 3 nucleotide sequences encoding beta-secretase	
CC	proteins. Beta-secretase is an enzyme involved in the production of one	
CC	of the components of amyloid plaques involved in Alzheimer's disease. The	
CC	invention includes an expression vector comprising the nucleotide	
CC	sequence, a host cell comprising the expression vector, and a process for	
CC	producing the protein through culturing the transformed cells. Also	
CC	included in the invention are a polypeptide derivative of the beta-	
CC	secretase protein, a fusion protein comprising beta-secretase fused to a	
CC	heterologous amino acid sequence, and a method for modulating the levels	
CC	of beta-secretase polypeptide in a mammal comprising administering the	
CC	polynucleotide sequence. Beta-secretase exhibits neuroprotective and	
CC	neurotropic activity. The beta-secretase nucleotide sequence may be used	
CC	map locations of the beta-secretase gene and related genes on chromosomes	
CC	and as hybridization probes in diagnostic assays to test for the presence	
CC	of beta-secretase DNA or RNA, such as in Alzheimer's disease, Down's	
CC	syndrome, and amyloid angiopathy. The nucleotide sequence may also be	
CC	used as anti-sense inhibitors of beta-secretase expression, in gene	
CC	therapy of Alzheimer's disease, and for the identification of compounds	
CC	that modulate beta-secretase activity. Antibodies to the beta-secretase	
CC	protein may be used for in vitro and in vivo diagnostic purposes to	
CC	detect the presence of beta-secretase polypeptide in a body fluid or cell	
CC	sample. The present sequence represents murine cDNA encoding beta-	
CC	secretase	
XX		
XX		
SQ	Sequence 1503 BP; 315 A; 439 C; 426 G; 323 T; 0 U; 0 Other;	
Alignment of: US-10-726-967A-1 x AAA28279 ..		
Alignment segment 1/1: (+)		
	Quality: 77.00	Score: 89.5
	Matching length: 20	Total length: 20
	Matching Percent Similarity: 90.00	Matching Percent Identity: 80.00
	Total Percent Similarity: 90.00	Total Percent Identity: 80.00

```

Alignment:          Gaps:      0

                22 ThrGlnHtAGLYILeArgLeuProLeuArgSerGlyLeuGLYIalaPr 38
                |||:::|||||||
        64 ACCCATCTCGGCATCCGGCTGCCCTTTCGACGCGCCTGCGACGGGCAACC 113
                |||
        38 oLeuGLYLeu                                41
                |||
        114 CCTGGGCCCCG                                  123

Sequence name: rmgpzndb.AAF83845

Sequence documentation:
ID   AAF83845 standard; DNA; 1506 BP.
XX
XX   AAF83845;
XX
DT   06-AUG-2001 (first entry)
DE   Mouse aspartic secretase-2 (mASP-2) encoding DNA.
XX
XX   Aspartic secretase-2; mASP-2; Alzheimer's disease; cancer; nootropic;
KW   neuroprotective; cytostatic; ds.
XX
OS   Mus musculus.
FH
FH   Key Location/Qualifiers
FT   CDS 1..1506
           /*tag= a
           /product= "mASP-2"
FT
FT   PN   WO200136600-A1.
XX
XX   PD   25-MAY-2001.
XX
XX   PF   16-NOV-2000; 2000MO-US031583.
XX
XX   PR   16-NOV-1999; 99US-0165800P.
XX   PR   15-NOV-2000; 2000US-00713158.
XX
XX   PA   (SMIK ) SMITHKLINE BEECHAM CORP.
XX   PA   (SMIK ) SMITHKLINE BEECHAM PLC.
XX
XX   PI   Zhu Y, Li X, Powell DJ, Christie G;
DR   WPI; 2001-343813/36.
DR   P-PDB; AAB84948.
XX
XX   New mouse aspartic secretase-2 polypeptide, useful for screening drugs
PT   for the prevention and treatment of Alzheimer's disease and cancer.
XX
XX   Claim 1; Page 23; 31pp; English.
PS
CC   This DNA encodes a mouse aspartic secretase-2 (mASP-2) polypeptide. The
CC   mASP-2 polypeptide can be expressed by standard recombinant methodology.
CC   mASP-2 can be used to discover drugs for the prevention and treatment of
CC   diseases including Alzheimer's, cancer, and prohormone processing
CC   dyfunctions, particular where knockout mice are used
XX
SQ   Sequence 1506 BP; 316 A; 439 C; 427 G; 324 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAF83845 ..

Alignment segment 1/1: (+)

              Quality:    77.00      EScore:    89.5
Matching length:         20            Total length:       20
Matching Percent Similarity: 90.00      Matching Percent Identity: 80.00
Total Percent Similarity:   90.00      Total Percent Identity: 80.00
Gaps:                     0

```



CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
CC and the fragment retain the beta-secretase activity of the mammalian Asp2  
CC protein. Also included is an isoform of amyloid protein precursor (APP)  
CC comprising the amino acid sequence of a APP or its fragment containing an  
CC cleavage site recognizable by a mammalian beta-secretase, and further  
CC comprising two lysine residues at the carboxyl terminus of the amino acid  
CC sequence of the mammalian APP or APP fragment. The polypeptides are used  
CC for assaying for modulators of beta-secretase activity; identifying  
CC agents that inhibit the APP processing activity of human Asp2 aspartyl  
CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2  
CC; and for reducing cellular production of amyloid beta (A-beta) from APP.  
CC Agents identified by the above methods are useful for treating  
CC Alzheimer's disease; and for identifying modulators of amyloid-beta  
CC (A-beta) peptide production, for use in designing therapeutics for the  
CC treatment or prevention of Alzheimer's disease. Probes and primers  
CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp  
CC nucleic acids in *in vitro* assays and in Northern and Southern blots. The  
CC present sequence represents the coding sequence of mouse Asp-2a used in  
CC the methods of the invention

XX Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11704 ..

Alignment segment 1/1: (+)

	Quality:	77.00	Score:	89.5
Matching length:	20		20	
Matching Percent Similarity:	90.00		80.00	
Total Percent Similarity:	90.00		80.00	
Gaps:	0			
Total Percent Identity:			80.00	

Alignment:

```
22 ThrGlnH1SGlyI1eArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGATCCGGCTGCCCTTGGCAGCGGCTGGCAGGGCCACC 113
|||||
38 OleuGlyLeu 41
|||||
114 CTGGGGCTGG 123
```

Sequence name: rmgp2ndb.AAD17867

Sequence documentation:

ID AAD17867 standard; cDNA; 2043 BP.

XX AAD17867;

XX 10-DEC-2001 (first entry)

XX Murine aspartyl protease 2(a) [Asp2(a)] cDNA.

XX Murine aspartyl protease 2(a); Asp2(a); amyloid precursor protein; APP;

KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;

KW amyloid plaque; neuronal loss; proteolytic; neurotropic; neuroprotective;

KW ss.

XX Mus musculus.

XX OS

XX Key

XX FT CDS

XX GB235767-A.

XX PD 04-JUL-2001.

XX PF 22-SEP-2000; 2000GB-00023315.

XX PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99MO-US020881.

PR 13-OCT-1999; 99US-00416901.

PR 06-DEC-1999; 99US-0169232P.

XX (PMA) PHARMACIA & UPJOHN CO.

XX PI

XX Blenkoweki MJ, Gurney M;

XX WPI; 2001-444208/48.

XX P-PSDB; AAE10631.

XX PT Polypeptide comprising fragments of human aspartyl protease with amyloid

XX precursor protein processing activity and alpha-secretase activity, for

XX identifying modulators useful in treating Alzheimer's disease.

XX Example 3; Fig 4; 187pp; English.

XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1

XX proteins which lack transmembrane domain or amino terminal domain or

XX cytoplasmic domain and retains alpha-secretase activity and amyloid

XX protein precursor (APP) processing activity. The proteins of the

XX invention are useful for assaying hu-Asp1 alpha-secretase activity, which

XX in turn is useful for identifying modulators of hu-Asp1 alpha-secretase

XX activity, where modulators that increase hu-Asp1 alpha-secretase activity

XX are useful for treating Alzheimer's disease (AD) which causes progressive

XX dementia with consequent formation of amyloid plaques, neurofibrillary

XX tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful

XX for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein

XX with the substrate under acidic conditions and determining the level of

XX hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding

XX murine Asp2(a) protein

XX Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD17867 ..

Alignment segment 1/1: (+)

	Quality:	77.00	Score:	89.5
Matching length:	20		20	
Matching Percent Similarity:	90.00		80.00	
Total Percent Similarity:	90.00		80.00	
Gaps:	0			
Total Percent Identity:			80.00	

Alignment:

```
22 ThrGlnH1SGlyI1eArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||
64 ACCCATCTCGGATCCGGCTGCCCTTGGCAGCGGCTGGCAGGGCCACC 113
|||||
38 OleuGlyLeu 41
|||||
114 CTGGGGCTGG 123
```

Sequence name: rmgp2ndb.AAD13023

Sequence documentation:

ID AAD13023 standard; cDNA; 2043 BP.

XX AAD13023;

XX 23-OCT-2001 (first entry)

XX Murine aspartyl protease 2a (murine Asp2a) cDNA.

XX Mouse; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;

KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;

KW neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotropic;

KW neuroprotective; antisense therapy; gene therapy; ss.

XX Mus musculus.

XX OS

Key Location/Qualifiers  
 CDS 1..1506  
 FT /\*tag= a  
 FT /product= "Murine aspartyl protease 2a"

W0200150829-A2.

19-JUL-2001.

09-MAY-2001; 2001WO-IB000799.

09-MAY-2001; 2001WO-IB000799.

(BIEN/) BIENKOWSKI M J.

(GURNEY/) GURNEY M E.

(HEINRICHSON/) HEINRICHSON R L.

(PARODI/) PARODI L A.

(YANR/) YAN R.

WPI; 2001-483072/52.

P-PSDB; AAE06861.

Novel purified polypeptide comprising fragment of mammalian aspartyl protease 2, lacking Asp2 transmembrane domain and retaining beta secretase activity of Asp2 useful for identifying inhibitors of Asp2 activity.

Claim 26; Fig 4; 185pp; English.

The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid precursor protein (APP) isoforms and their corresponding DNA molecules. Human aspartyl proteases can act as beta-secretase proteases useful for treating Alzheimer's disease. APP isoforms are useful for identifying modulators of amyloid-beta peptide production, for use in designing therapeutics for the treatment and prevention of Alzheimer's disease, dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis and neuronal loss. APP isoforms are also used in methods for identifying inhibitors and modulators of human Asp2 activity. The invention relates to a method for identifying agents that modulate the activity of human aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used as a means to screen in cellular assays for the inhibitors of beta- and gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in polymerase chain reactions (PCR). The probes are useful for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and Southern blots. The present cDNA sequence encodes murine aspartyl protease 2 (murine Asp2), a 'long' form designated as (murine Asp2a) related to the invention.

Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13023 ..

Alignment segment 1/1: (+)  
 Quality: 77.00  
 Matching Length: 20  
 Matching Percent Similarity: 90.00  
 Total Length: 20  
 Total Percent Identity: 80.00  
 Gaps: 0

Alignment:

22 Thrglnhsglylleargleuproleuargserglyleuylalapr 38  
 64 ACCCATCTCGGCACTCGGCTGCCCTTGGCAGCGGCTGGCAGGCGCACC 113  
 38 oLeuGlyLeu 41  
 114 CTGGGCGCTG 123

Sequence name: rngp2ndb:AAD06741

Sequence documentation:  
 ID AAD06741 standard; cDNA, 2043 BP.

AC AAD06741;

DT 10-AUG-2001 (first entry)

DE Murine aspartyl protease 2a (Asp2a) cDNA.

XM Murine; alpha-secretase; amyloid precursor protein; APP; therapy;

KM Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp 2a;

KM beta-secretase; ss.

OS Mus musculus.

Key Location/Qualifiers  
 CDS 1..1506  
 FT /\*tag= a  
 FT /product= "Murine aspartyl protease 2a"

W0200123533-A2.

05-APR-2001.

22-SEP-2000; 2000WO-US026080.

23-SEP-1999; 99US-0155493P.

23-SEP-1999; 99WO-US020881.

13-OCT-1999; 99US-00416901.

06-DEC-1999; 99US-0169232P.

(PHAA ) PHARMACIA & UPJOHN CO.

Gurney M, Bienkowski M;

WPI; 2001-290516/30.

P-PSDB; AAE02583.

Enzymes that cleave the alpha-secretase site of the amyloid precursor protein, useful for the treatment of Alzheimer's disease.

Example 3; Fig 4; 189pp; English.

The present invention relates to enzymes for cleaving the alpha-secretase site of the amyloid precursor protein (APP) and methods of identifying those enzymes. The methods may be used to identify enzymes that may be used to cleave the alpha-secretase cleavage site of the APP protein. The enzymes may be used to treat or modulate the progress of CC Alzheimer's disease. The present sequence is murine aspartyl protease (Asp) 2a cDNA. Asp 2a has beta-secretase protease activity.

Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD06741 ..

Alignment segment 1/1: (+)  
 Quality: 77.00  
 Matching Length: 20  
 Matching Percent Similarity: 90.00  
 Total Length: 20  
 Total Percent Identity: 80.00  
 Gaps: 0

Alignment:

22 Thrglnhsglylleargleuproleuargserglyleuylalapr 38  
 64 ACCCATCTCGGCACTCGGCTGCCCTTGGCAGCGGCTGGCAGGCGCACC 113  
 38 oLeuGlyLeu 41  
 114 CTGGGCGCTG 123

Sequence name: rngp2ndb:AA511519

Sequence documentation:

ID AA511519 standard; cDNA; 2043 BP.

AC AA511519;

DT 24-OCT-2001 (first entry)

DE Mouse cDNA encoding Aspartyl protease 2(a), Asp2(a).

XX Mouse: Aspartyl protease; Asp2(a); beta-secretase; neurotropic;

KM neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

XX amyloid-beta; Abeta; ss.

OS Mus musculus.

XX Key Location/Qualifiers

FT CDS 1..1506

XX /tag= a

XX /product= "Asp2(a)"

XX MO200149098-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001MO-1B000798.

XX 09-MAY-2001; 2001MO-1B000798.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX BIENKOWSKI MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-502549/55.

XX P-PSDB; AAU06605.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

PT protease 2, lacking Asp2 transmembrane domain and retaining beta

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

PT activity.

XX Claim 26; Fig 4; 185pp; English.

XX The invention relates to a purified polypeptide comprising a fragment of

CC mammalian aspartyl protease (Asp2) protein which lacks the Asp2

CC transmembrane domain and the Asp2 protein, and where the polypeptide and

CC the fragment retain the beta-secretase activity of the mammalian Asp2

CC protein. The invention also details polynucleotides for the Asp proteins

CC and vectors expressing them, and a polypeptide (isoform of amyloid

CC protein precursor (APP) comprising the amino acid sequence of an APP or

CC its fragment containing an APP cleavage site recognizable by a mammalian

CC beta-secretase, and further comprising two lysine residues at the

CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP

CC fragment. Also included in the invention are methods of identifying

CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are

CC useful for treating Alzheimer's disease. APP is useful in methods for

CC identifying inhibitors or modulators of human Asp2 activity and amyloid-

CC beta (Abeta) peptide production. APP is also useful in designing

CC therapeutics for the treatment or prevention of Alzheimer's disease. APP

CC comprising the APP-Sw-beta-secretase peptide sequence (NDA), which is

CC associated with increased levels of Abeta processing is useful in assays

CC relating the Alzheimer's research. The expression vector is useful for

CC recombinantly expressing APP. Nucleic acids that hybridize to Asp

CC oligonucleotides are useful as probes or primers. The probes are useful

CC for detecting hu-APP nucleic acids in in vitro assays and in Northern and

CC Southern blots. The present sequence encodes mouse Asp2(a)

SO Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AA511519

Alignment segment 1/1: (+)

	Quality:	77.00	Score:	89.5
Matching length:	20			
Matching Percent Similarity:	90.00			80.00
Total Percent Similarity:	90.00			80.00
Gaps:	0			

Alignment:

22	THRGHNSGLYTLAARGLEUPROLEUARGSERGLYLEUGLYALAPR	38
64	ACCCATCTCGGCATCGGCTGCCCTTCGACAGGGCTGGCAGGGCCACC	113
38	OLEUGLYLEU	41
114	CTGGGCTCG	123

Sequence name: rngp2ndb:ABL52459

Sequence documentation:

ID ABL52459 standard; cDNA; 2043 BP.

AC ABL52459;

DT 16-JUL-2002 (first entry)

XX Mouse Asp-2(a) nucleotide sequence SEQ ID NO:7.

XX Mouse: Asp-1; Asp-2; aspartyl protease; enzyme; Alzheimer's disease;

XX proteolytic; gene; ss.

XX Mus musculus.

XX Key Location/Qualifiers

FT CDS 1..1506

XX /tag= a

XX /product= "Asp-2(a)"

XX /note= "aspartyl protease"

XX GB2367060-A.

XX 27-MAR-2002.

XX 29-OCT-2001; 2001GB-00025934.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99MO-US020881.

XX 13-OCT-1999; 99US-00416901.

XX 06-DEC-1999; 99US-0169232P.

XX 22-SEP-2000; 2000GB-00023315.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX BIENKOWSKI MJ, Gurney M;

XX WPI; 2002-397167/43.

XX P-PSDB; ABB78592.

XX Human aspartyl protease 1 substrates useful in assays to detect aspartyl

XX protease activity, e.g. for the diagnosis of Alzheimer's disease.

XX Example 3; Fig 4; 182pp; English.

XX The present invention describes a human aspartyl protease 1 (hu-Asp1)

XX substrate (I) which comprises a peptide of no more than 50 amino acids,

XX and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-

XX Glu-Pro. Also described are: (i) a method (ii) for assaying hu-Asp1

proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with (1) under acidic conditions; and (b) determining the level of hu-Asp1 proteolytic activity; (2) a purified polynucleotide (III) comprising a nucleotide sequence that hybridizes under stringent conditions to the non-coding strand complementary to a defined 1804 nucleotide sequence (see AB152456) where the nucleotide sequence encodes a polypeptide having Asp1 proteolytic activity and lacks nucleotides encoding a transmembrane domain; (3) a purified polynucleotide (III') comprising a sequence that hybridizes under stringent conditions to (III) (the nucleotide sequence encodes a polypeptide further lacking a pro-peptide domain corresponding to amino acids 23-62 of hu-Asp1 (see AB878589)); (4) a vector (IV) comprising (III) or (III') and (5) a host cell (V) transformed or transfected with (III), (III') and/or (IV). The hu-Asp1 protease substrate (II) may be used as an enzyme substrate in assays to detect aspartyl protease activity, (II) and therefore diagnose diseases associated with aberrant hu-Asp1 expression and activity such as Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present sequence encodes mouse Asp-2(a) from the present invention

Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL52459 ..

Alignment segment 1/1: (+)

	Quality:	77.00	Score:	89.5
Matching length:	20		20	
Matching Percent Similarity:	90.00		80.00	
Total Percent Similarity:	90.00		80.00	
Gaps:	0			

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAPr 38
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||
64 ACCCATCTCGGCATCCGGCTGCCCCCTTCGACAGCGCTGGCAGGCCACC 113
38 oLeuGlyLeu
   |||::|||::|||::|||::|||::|||::|||::|||::|||
114 CCTGGGCGCTG
   |||::|||::|||::|||::|||::|||::|||::|||::|||
123

```

Sequence name: rmp2ndb:ADJ94319

Sequence documentation:

ID ADJ94319 standard; cDNA; 2043 BP.

AC ADJ94319;

XX 03-JUN-2004 (first entry)

DE Mouse cDNA encoding aspartyl protease 2b, Asp-2b.

XX Mouse; sg; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

KW neurotrophic; neuroprotective; amyloid beta.

OS Mus musculus.

PN US6706485-B1.

PD 16-MAR-2004.

XX 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0153493P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
XX WPI; 2004-236722/22.  
DR P-PSDB; ADJ94320.

XX Identifying agents that modulate activity of Asp2 aspartyl protease  
PT useful for treating or preventing Alzheimer's disease involves comparing  
PT APP processing activity of protease in presence and absence of test  
PT agent.

XX Example 3; SEQ ID NO 7; 109pp; English.

XX The invention relates to identifying agents that modulate activity of  
CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
CC precursor protein (APP) in the presence and absence of a test agent;  
CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
CC beta, determining APP processing activity of Asp2 in presence and absence  
CC of the test agent, and comparing the activities to identify agents that  
CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
CC nucleic acid encoding hu-Asp2 protease sequence, a host cell comprising  
CC the vector and the method of producing hu-Asp polypeptide, an isolated  
CC antibody that specifically binds to hu-Asp polypeptides, identifying a  
CC cell that can be used to screen for inhibitors of beta secretase  
CC activity, novel isoforms of amyloid protein precursor (APP), where the  
CC last 2 carboxy terminus amino acids of that isoform are both lysine  
CC residues (e.g. those designated APP695-KK or carrying the Swedish  
CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW  
CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
CC for assaying for beta secretase activity and screening for inhibitors of  
CC beta-secretase) and polynucleotides that encode the APP proteins. The  
CC method is useful for identifying agents that modulate the activity  
CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
CC protease. Preferably, the method is useful for identifying agents that  
CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
CC precursor protein processing activity, are useful for treating or preventing  
CC Alzheimer's disease. The present sequence encodes an aspartyl protease of  
CC the invention.

XX Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94319 ..

Alignment segment 1/1: (+)

	Quality:	77.00	Score:	89.5
Matching length:	20		20	
Matching Percent Similarity:	90.00		80.00	
Total Percent Similarity:	90.00		80.00	
Gaps:	0			

Alignment:

```

22 ThrGlnHisGlyIleArgLeuProLeuArgSerGlyLeuGlyValAPr 38
   |||::|||::|||::|||::|||::|||::|||::|||::|||
64 ACCCATCTCGGCATCCGGCTGCCCCCTTCGACAGCGCTGGCAGGCCACC 113
38 oLeuGlyLeu
   |||::|||::|||::|||::|||::|||::|||::|||::|||
114 CCTGGGCGCTG
   |||::|||::|||::|||::|||::|||::|||::|||::|||
123

```

Sequence name: rmp2ndb:AD050415

Sequence documentation:

ID AD050415 standard; cDNA; 2043 BP.

AC AD050415;

XX 29-JUL-2004 (first entry)

DE Murine aspartyl protease (Asp) -2 cDNA.



KM Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;  
 KM Alzheimer's disease; gene therapy; murine; gene; ss.  
 OS Mus musculus.  
 XX Key Location/Qualifiers  
 FT CDS 1..1506  
 FT /\*tag= a  
 FT /product= "Murine aspartyl protease (Asp) -2"  
 PN US6737510-B1.  
 PD 18-MAY-2004.  
 XX  
 XX 12-APR-2000; 2000US-00548373.  
 XX  
 XX 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99WC-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 XX  
 XX (PHAA ) PHARMACIA & UPJOHN CO.  
 PA Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
 PI WPI, 2004-387112/36.  
 DR P-PSDB; ADO50416.  
 XX  
 XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG  
 PT involved in processing amyloid precursor protein into amyloid beta,  
 PT useful in preparing a composition for treating or preventing Alzheimer's  
 PT disease.  
 XX  
 XX Example 3; SEQ ID NO 7, 108pp; English.  
 XX  
 XX The invention relates to a method for identifying an agent that decreases  
 CC the protease activity of the aspartyl protease (Asp) polypeptide. It also  
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
 CC cleavage site of the amyloid precursor protein (APP). The invention is  
 CC useful in preparing a composition for treating or preventing Alzheimer's  
 CC disease. It is also useful in gene therapy. The present sequence is  
 CC murine Asp-2 cDNA. This sequence is used to illustrate the method of the  
 CC invention.  
 XX  
 XX Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ADO50415 ..  
 Alignment segment 1/1: (+)  

Matching Length:	77.00	Total Length:	89.5
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00

Gaps: 0

Alignment:

```

22 ThrglnhISgLy1leArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
64 ACCCATCTCGGATCGGCTGCCCTCGCACGGCGCTGGCAGGCGCAC 113
38 oLeuGlyLeu
|||||:|||||:
114 CTTGGGCGCTG
|||||:|||||:
123

```

Sequence name: trngp2ndb.ADR75328

Sequence documentation:  
 ID ADR75328 standard; cDNA; 2043 BP.  
 XX  
 AC ADR75328;

XX  
 DT 18-NOV-2004 (first entry)  
 XX  
 DE Murine aspartyl protease (Asp) -2 cDNA.  
 XX  
 KM Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;  
 KM chromosome identification; Alzheimer's disease; murine; gene; ss.  
 XX  
 OS Mus musculus.  
 XX Key Location/Qualifiers  
 FT CDS 1..1506  
 FT /\*tag= a  
 FT /product= "Murine aspartyl protease (Asp) -2"  
 PN US2004166507-A1.  
 PD 26-AUG-2004.  
 XX  
 XX 29-AUG-2003; 2003US-00652045.  
 XX  
 XX 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 13-OCT-1999; 99US-00416901.  
 XX  
 XX (GURN/) GURNEY M E.  
 PA (BIEN/) BIENKOWSKI M J.  
 PA (HEIN/) HEINRICHSON R L.  
 PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.  
 XX  
 XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
 PI WPI, 2004-624916/60.  
 DR P-PSDB; ADR75329.  
 XX  
 XX Novel purified/isolated polynucleotide encoding polypeptide having  
 PT aspartyl protease activity involved in processing amyloid precursor  
 PT protein into amyloid beta, useful in identifying agent decreasing  
 PT activity of aspartyl protease.  
 XX  
 XX Example 3; SEQ ID NO 7, 107pp; English.  
 XX  
 XX The invention relates to nucleic acid sequences encoding aspartyl  
 CC protease (Asp) polypeptides having aspartyl protease activity involved in  
 CC processing amyloid precursor protein (APP) into amyloid beta. The  
 CC invention also relates to a method for identifying an agent that  
 CC decreases the protease activity of the Asp. Asp DNA is useful in  
 CC chromosome identification as they can hybridise with a specific location  
 CC on a human chromosome and in identifying the relationship between genes  
 CC and diseases (particular gene responsible for causing diseases). It is  
 CC also useful for identifying candidates to modulate the progression of  
 CC Alzheimer's disease. Asp is useful in raising antibodies that are useful  
 CC in diagnostic assay for detecting hu-Asp polypeptide expression. The  
 CC present sequence is the murine Asp-2 cDNA. This sequence is used to  
 CC illustrate the method of the invention.  
 XX  
 XX Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ADR75328 ..  
 Alignment segment 1/1: (+)  

Matching Length:	77.00	Total Length:	89.5
Matching Percent Similarity:	90.00	Matching Percent Identity:	80.00
Total Percent Similarity:	90.00	Total Percent Identity:	80.00

Gaps: 0

Alignment:

```

22 ThrglnhISgLy1leArgLeuProLeuArgSerGlyLeuGlyAlaPr 38

```

```

||||:|||||
64 ACCACCTCGGATCCGGCTGCCCTTCGACGGCTGCAAGGCCACC 113
38 OLeuGlyLeu 41
|||||
114 CCTGGGCGCTG 123

```

Sequence name: rngp2ndb:ABK63758

Sequence documentation:

```

ID ABK63758 standard; cDNA; 2158 BP.
XX
AC ABK63758;
XX
DT 18-JUN-2002 (first entry)
XX
DE Rat sequence differentially expressed in response to a hepatotoxin #1665.
XX
KW Rat; ss; hepatotoxin; expressed sequence tag; EST; drug screening;
XX differential expression; centrilobular necrosis; steatosis.
XX
OS Rattus norvegicus.
XX
PN W0200210453-A2.
XX
PD 07-FEB-2002.
XX
PF 30-JUL-2001; 2001WO-US023872.
XX
PR 31-JUN-2000; 2000US-0222040P.
PR 02-NOV-2000; 2000US-024880P.
PR 11-MAY-2001; 2001US-0290029P.
PR 15-MAY-2001; 2001US-0290645P.
PR 22-MAY-2001; 2001US-0292336P.
PR 06-JUN-2001; 2001US-0295798P.
PR 13-JUN-2001; 2001US-0287457P.
PR 19-JUN-2001; 2001US-029884P.
PR 09-JUL-2001; 2001US-0303459P.
XX
PA (GENE-) GENE LOGIC INC.
XX
PI Mendrick D, Potter MW, Johnson KR, Castle AL, Elashoff MR;
XX
DR WPI; 2002-241625/29.
XX
PT Predicting toxic effects of compounds or the progression of these toxic
XX effects by determining the changes in gene expression in tissues or cells
XX exposed to the toxin and comparing these to gene expression in unexposed
XX tissues or cells.
XX
PS Claim 1; SEQ ID NO 1665; 239pp; English.
XX
XX

```

The invention relates to methods for predicting toxic effects of compounds or the progression of these toxic effects by determining the global changes in gene expression in tissues or cells exposed to the toxin and comparing these to gene expression in unexposed tissues or cells. Also included are methods of predicting at least one toxic effect of a compound or progression of a toxic effect, preferably the hepatotoxicity of a compound, comprising detecting the level of expression in a tissue or cell sample exposed to the compound of two or more genes listed in the specification, where differential expression of the genes is indicative of at least one toxic effect or progression. The method can also be used to identify an agent which modulates the toxic response and predict cellular pathways that a compound modulates in a cell. The methods utilize a set of at least two probes (on a solid support in kit form), where each of the probes comprises a sequence that specifically hybridizes to a gene listed in the specification, a computer system comprising a database containing information identifying the expression level in a tissue or cell sample exposed to a hepatotoxin of a set of genes comprising at least two genes listed in the specification, and a user interface to view the information used to present information identifying the expression level in a tissue or cell of at least one gene listed in the specification. The method is useful for elucidating global

CC changes in gene expression and for identifying toxicity markers in  
 CC tissues or cell exposed to a known toxin. The genes may be used as  
 CC toxicity markers in drug screening and toxicity assays. The genes and  
 CC gene expression information may be used as diagnostic markers for the  
 CC prediction or identification of the physiological state of tissue or cell  
 CC sample that has been exposed to a compound or agent. Hepatotoxicity is  
 CC characterized by centrilobular necrosis and steatosis. The present  
 CC sequence is an expressed sequence tag (EST) or cDNA derived from a gene  
 CC which is differentially expressed in response to a hepatotoxic agent  
 XX  
 SQ Sequence 2158 BP; 458 A; 640 C; 619 G; 441 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABK63758 ..

Alignment segment 1/1: (+)

	Quality:	77.00		Score:	89.6
Matching	Length:	20	Total	Length:	20
Percent	Similarity:	90.00	Matching	Percent	Identity:
Total	Percent	Similarity:	90.00	Total	Percent
	Gaps:	0		Percent	Identity:
					80.00

Alignment:

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22 ThrglnhtsGlyLeuArgLeuProLeuArgSerGlyLeuGlyAlaPr 38
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491 ACCACCTCGGATCCGATCCGATGCCCTTCGACGGCTGCAAGGCCACC 540
541 CCTGGGCGCTG 550

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Sequence name: rngp2ndb:ADB52907

Sequence documentation:

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ID ADB52907 standard; DNA; 2158 BP.
XX
AC ADB52907;
XX
DT 04-DEC-2003 (first entry)
XX
DE Primary rat hepatocyte toxicity modelling related gene SEQ ID NO:3449.
XX
KW toxic effect; gene expression profile; hepatotoxicity; diagnostic marker;
XX toxicity marker; toxicity progression; drug screening;
XX primary rat hepatocyte toxicity modelling; gene; ds.
XX
OS Rattus norvegicus.
XX
PN W02003065993-A2.
XX
PD 14-AUG-2003.
XX
XX

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04-FEB-2003; 2003WO-US003482.
XX
XX
04-FEB-2002; 2002US-0353171P.
PR 13-MAR-2002; 2002US-0363534P.
PR 08-APR-2002; 2002US-0370248P.
PR 10-APR-2002; 2002US-0371133P.
PR 10-APR-2002; 2002US-0371135P.
PR 10-APR-2002; 2002US-0371150P.
PR 11-APR-2002; 2002US-0371413P.
PR 19-APR-2002; 2002US-0373601P.
PR 22-APR-2002; 2002US-0374139P.
PR 08-MAY-2002; 2002US-0378370P.
PR 09-MAY-2002; 2002US-0378652P.
PR 09-MAY-2002; 2002US-0378653P.
PR 09-MAY-2002; 2002US-0394230P.
PR 09-JUL-2002; 2002US-0394230P.
PR 09-JUL-2002; 2002US-0394253P.
PR 04-SEP-2002; 2002US-0407688P.
PR 28-JAN-2003; 2003US-0442900P.

```



FT	CDS		306..1811	
FT		/tag=	a	"beta-secretase"
FT		/product=	L,	
PX	MO200047618-A2.			
PX				
PD	17-AUG-2000.			
PF	10-FEB-2000; 2000WO-US003819.			
PR	10-FEB-1999; 99US-0119571P.			
PR	15-JUN-1999; 99US-0139172P.			
XX	(ELAN-) ELAN PHARM INC.			
PA				
PX	Anderson JP, Baai G, Doane MT, Frigon N, John V, Power M,			
PI	Sinha S, Tateanu G, Tung J, Wang S, Mcconlogue L;			
DR	WPI; 2000-533011/48.			
DR	P-PESDB; AAB07896.			
PT	Purified beta-secretase protein used in assays to discover inhibitors			
PT	which can be used for the treatment of amyloidogenic diseases e.g.			
PS	Alzheimer's disease.			
PS	Disclosure; Fig 1B; 121pp; English.			
CC	The specification describes a beta-secretase enzyme. The enzyme cleaves			
CC	beta-amyloid precursor protein to produce beta-amyloid peptide. This			
CC	enzyme is therefore implicated in the production of amyloid plaque			
CC	components which accumulate in the brains of individuals afflicted with			
CC	Alzheimer's disease. Inhibitors of beta-secretase are administered to a			
CC	mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-			
CC	like pathology to test if they maintain or improve cognitive ability or			
CC	reduce the plaque burden. The compounds are used for the treatment of			
CC	amyloidogenic diseases e.g. Alzheimer's disease. The present sequence			
CC	encodes a human beta-secretase enzyme			
SO	Sequence 2348 BP; 489 A; 713 C; 661 G; 484 T; 0 U; 1 Other;			
	Alignment of: us-10-726-967a-1 x AAAS95S1 ..			
	Alignment segment 1/1: (-)			
		Matching Quality:	38..00	Bscore: 241
		Percent Similarity:	64.29	Total length: 14
	Total Percent Similarity:	Gaps: 64.29	0	Matching Percent Identity: 57.14
				Total Percent Identity: 57.14
Alignment:				
	25 GIYILEARGLAHPLEUARGSERGJYLEUGLYGYALAPRO			38
	89 GGGAATCGGAGGCCCTACATCGGCACSGGGGCGCAGGCTT			48
Sequence name:	rmpg2ndb:ADP44631			
Sequence documentation:				
ID	ADP44631 standard; mRNA; 5625 BP.			
XX				
AC	ADP44631;			
XX				
DT	26-AUG-2004 (first entry)			
DE	Human beta-site APP cleaving enzyme type 1 transcript variant D mRNA.			
KM	neurodegenerative disorder; CNS; Parkinson's disease; Alzheimer's;			
KM	Huntington's; spinocerebellar ataxia type 1;			
KM	spinocerebellar ataxia type 3; SCAs; Machado-Joseph disease;			
KM	dentatorubral-pallidoluysian atrophy; DRPLA;			
KM	beta-site APP cleaving enzyme type 1; amyloid precursor protein; BACE1;			
KM	AβP2; memapsin2; βsi human; transcript variant D.			

XX	Homo sapiens.
OS	WO2004047872-A2.
PN	10-JUN-2004.
PD	26-NOV-2003; 2003MO-US037650.
PF	26-NOV-2002; 2002US-0429387P.
PR	03-FEB-2003; 2003US-0444614P.
XX	(MEDT ) MEDTRONIC INC.
PA	Kaemmerer WF;
PI	WPI; 2004-44106/41.
DR	New medical system comprising an intracranial access device, a mapping means, a small interfering RNA or vector encoding the RNA, and a delivery means, useful for treating a neurodegenerative disorder.
PT	Claim 23; SEQ ID NO 21; 228bp; English.
PS	The invention relates to a novel medical system for creating a neurodegenerative disorder comprising an intracranial access device, a mapping means for locating a predetermined location in the brain, a deliverable amount of a small interfering RNA (siRNA), or vector encoding the siRNA, and a delivery means. The system of the invention has applications related to the CNS and may be useful for treating a neurodegenerative disorder, such as Parkinson's disease, Alzheimer's disease, Huntington's disease, spinocerebellar ataxia (SCA) types 1 and 3 (Machado-Joseph disease), dentatorubral-pallidoluysian atrophy (DRLA).
CC	The current sequence is that of the human beta-site APP (amyloid precursor protein) cleaving enzyme type 1 (BACE1;ASP2;memapsin2)
CC	transcript variant D mRNA of the invention.
SQ	Sequence 5625 BP; 1457 A; 1447 C; 1359 G; 0 T; 1362 U; 0 Other;
Alignment of:	us-10-726-967a-1 x ADP44631 ..
Alignment segment 1/1: (-)	
Matching length: 35.00	Bscore: 253
Total Similarity: 64.29	Total Length: 14
Total Percent Similarity: 64.29	Matching Percent Identity: 57.14
Gaps: 0	Total Percent Identity: 57.14
Alignment:	
25 GIYILeArgLeuProLeuArgSerGlyIleuGIyAlAPro	38
:	
230 GGGAATCGAGGCCGGCTACATCGGCACAGGGGGCACACTCCT	189
Sequence name: rmpg2ndb:ADP44630	
Sequence documentation:	
ID ADP44630 standard; mRNA; 5700 BP.	
XX AC	ADP44630;
XX AC	
DT DT	26-AUG-2004 (first entry)
DE DE	Human beta-site APP cleaving enzyme type 1 transcript variant C mRNA.
RW RW	neurodegenerative disorder; CNS; Parkinson's disease; Alzheimer's;
KW KW	Huntington's; spinocerebellar ataxia type 1;
KW KW	spinocerebellar ataxia type 3; SCA; Machado-Joseph disease;
KW KW	dentatorubral-pallidoluysian atrophy; DRPLA;
KW KW	beta-site APP cleaving enzyme type 1; amyloid precursor protein; BACE1;
XX XX	ASP2; memapsin2; ss; human; transcripct variant C.



```
ID ADP44629 standard; mRNA; 5757 BP.
XX
AC ADP44629;
XX
DT 26-AUG-2004 (first entry)
XX
DE Human beta-site APP cleaving enzyme type 1 transcript variant B mRNA.
XX
KW neurodegenerative disorder; CNS; Parkinson's disease; Alzheimer's;
KW Huntington's; spinocerebellar ataxia type 1;
KW spinocerebellar ataxia type 3; SCA; Machado-Joseph disease;
KW dentatorubral-pallidoluysian atrophy; DRPLA;
KW beta-site APP cleaving enzyme type 1; amyloid precursor protein; BACE1;
KW ASP2; memapsin2; ss; human; transcript variant B.
XX
OS Homo sapiens.
XX
PN WO2004047872-A2.
XX
PD 10-JUN-2004.
XX
PF 26-NOV-2003; 2003WO-US037650.
XX
PR 26-NOV-2002; 2002US-0429387P.
PR 03-FEB-2003; 2003US-0444614P.
XX
PA (MEDT ) MEDTRONIC INC.
XX
PI Kaemmerer WF;
XX
DR WPI; 2004-441106/41.
XX
PT New medical system comprising an intracranial access device, a mapping
PT means, a small interfering RNA or vector encoding the RNA, and a delivery
PT means, useful for treating a neurodegenerative disorder.
XX
PS Claim 23; SEQ ID NO 19; 228bp; English.
XX
CC The invention relates to a novel medical system for treating a
CC neurodegenerative disorder comprising an intracranial access device, a
CC mapping means for locating a predetermined location in the brain, a
CC deliverable amount of a small interfering RNA (siRNA), or vector encoding
CC the siRNA, and a delivery means. The system of the invention has
CC applications related to the CNS and may be useful for treating a
CC neurodegenerative disorder, such as Parkinson's disease, Alzheimer's
CC disease, Huntington's disease, spinocerebellar ataxia (SCA) types 1 and 3
CC (Machado-Joseph disease) or dentatorubral-pallidoluysian atrophy (DRPLA).
CC The current sequence is that of the human beta-site APP (amyloid
CC precursor protein) cleaving enzyme type 1 (BACE1;ASP2;memapsin2)
CC transcript variant B mRNA of the invention.
XX
SQ Sequence 5757 BP; 1487 A; 1488 C; 1392 G; 0 T; 1390 U; 0 Other;
Alignment of: us-10-726-967a-1 x ADP44629 ..
Alignment segment 1/1: (-)
Quality: 35.00
Matching Length: 14 Total length: 253
Matching Percent Similarity: 64.29 Matching Percent Identity: 14
Total Percent Similarity: 64.29 Total Percent Identity: 57.14
Gaps: 0
Alignment:
25 G|Y|I|A|g|l|e|u|P|r|o|l|e|u|A|g|S|e|r|g|l|y|l|e|u|g|l|y|A|l|a|P|r|o 38
|||||  |||||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
230 GGGATCCGAGCCCGCTACATCGGCAAGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCT 189
Sequence name: rngp2ndb:ADP44628
Sequence documentation:
ID ADP44628 standard; mRNA; 5832 BP.
```

```
XX
AC ADP44628;
XX
DT 26-AUG-2004 (first entry)
XX
DE Human beta-site APP cleaving enzyme type 1 transcript variant A mRNA.
XX
KW neurodegenerative disorder; CNS; Parkinson's disease; Alzheimer's;
KW Huntington's; spinocerebellar ataxia type 1;
KW spinocerebellar ataxia type 3; SCA; Machado-Joseph disease;
KW dentatorubral-pallidoluysian atrophy; DRPLA;
KW beta-site APP cleaving enzyme type 1; amyloid precursor protein; BACE1;
KW ASP2; memapsin2; ss; human; transcript variant A.
XX
OS Homo sapiens.
XX
PN WO2004047872-A2.
XX
PD 10-JUN-2004.
XX
PF 26-NOV-2003; 2003WO-US037650.
XX
PR 26-NOV-2002; 2002US-0429387P.
PR 03-FEB-2003; 2003US-0444614P.
XX
PA (MEDT ) MEDTRONIC INC.
XX
PI Kaemmerer WF;
XX
DR WPI; 2004-441106/41.
XX
PT New medical system comprising an intracranial access device, a mapping
PT means, a small interfering RNA or vector encoding the RNA, and a delivery
PT means, useful for treating a neurodegenerative disorder.
XX
PS Claim 23; SEQ ID NO 18; 228bp; English.
XX
CC The invention relates to a novel medical system for treating a
CC neurodegenerative disorder comprising an intracranial access device, a
CC mapping means for locating a predetermined location in the brain, a
CC deliverable amount of a small interfering RNA (siRNA), or vector encoding
CC the siRNA, and a delivery means. The system of the invention has
CC applications related to the CNS and may be useful for treating a
CC neurodegenerative disorder, such as Parkinson's disease, Alzheimer's
CC disease, Huntington's disease, spinocerebellar ataxia (SCA) types 1 and 3
CC (Machado-Joseph disease) or dentatorubral-pallidoluysian atrophy (DRPLA).
CC The current sequence is that of the human beta-site APP (amyloid
CC precursor protein) cleaving enzyme type 1 (BACE1;ASP2;memapsin2)
CC transcript variant A mRNA of the invention.
XX
SQ Sequence 5832 BP; 1500 A; 1517 C; 1405 G; 0 T; 1410 U; 0 Other;
Alignment of: us-10-726-967a-1 x ADP44628 ..
Alignment segment 1/1: (-)
Quality: 35.00
Matching Length: 14 Total length: 253
Matching Percent Similarity: 64.29 Matching Percent Identity: 14
Total Percent Similarity: 64.29 Total Percent Identity: 57.14
Gaps: 0
Alignment:
25 G|Y|I|A|g|l|e|u|P|r|o|l|e|u|A|g|S|e|r|g|l|y|l|e|u|g|l|y|A|l|a|P|r|o 38
|||||  |||||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
230 GGGATCCGAGCCCGCTACATCGGCAAGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCT 189
Sequence name: rngp2ndb:ADQ22186
Sequence documentation:
ID ADQ22186 standard; DNA; 5876 BP.
```



DT	XX		26-AUG-2004 (first entry)	
DE	XX		Human soft tissue sarcoma-upregulated DNA - SEQ ID 284.	
KW	XX		soft tissue sarcoma; cytostatic; gene therapy; vaccine; screening; human;	
OS	XX		ds.	
PN	XX		Homo sapiens.	
PD	XX		MO2004048938-A2.	
PF	XX		10-JUN-2004.	
PR	XX		26-NOV-2003; 2003WO-US038193.	
PA	XX		26-NOV-2002; 2002US-0429739P.	
P1	XX		(PROT-) PROTEIN DESIGN LABS INC.	
P2	XX		Aziz N, Ginsburg WM, Zlotnik A;	
DR	XX		WPI; 2004-441208/41.	
PT	XX		Early detection of soft tissue sarcoma comprises determining expression	
PT	XX		of a gene in a first soft tissue sample and a normal soft tissue sample	
PT	XX		and comparing the gene expression, also useful in treating soft tissue	
PS	XX		sarcoma.	
PS	XX		Example 2; SEQ ID NO 284; 210pp; English.	
CC	XX		The invention relates to a novel method for detecting soft tissue sarcoma	
CC	XX		which comprises obtaining a first soft tissue sample from an individual,	
CC	XX		and a normal soft tissue sample from the same or different individual,	
CC	XX		determining the expression of a gene in both samples and comparing the	
CC	XX		expression of the gene in both soft tissue samples, where a higher level	
CC	XX		of protein expression in the first soft tissue sample indicates the	
CC	XX		presence of soft tissue sarcoma. The method of the invention has	
CC	XX		cytostatic applications and may be useful for detecting soft tissue	
CC	XX		sarcoma, possibly via gene therapy or vaccine production. The nucleic	
CC	XX		acid sequences may be useful in diagnostic and screening applications.	
CC	XX		The current sequence is that of a human soft tissue sarcoma-upregulated	
CC	XX		DNA of the invention. The current sequence is not shown within the	
CC	XX		specification per se but was submitted in CD format by the inventor.	
SQ	XX		Sequence 5878 BP; 1547 A; 1518 C; 1405 G; 1408 T; 0 U; 0 Other;	
			Alignment of: us-10-726-967a-1 x ADQ17467 ..	
			Alignment segment 1/1: (-)	
			Quality: 35.00	Escore: 253
			Matching Length: 14	Total Length: 14
			Matching Percent Similarity: 64.29	Matching Percent Identity: 57.14
			Total Percent Similarity: 64.29	Total Percent Identity: 57.14
			Gaps: 0	
			Alignment:	
			25 G YI LeA rgLeuProLeuA rgSerG yLeuG yC yAlaPro	38
			:::	
			238 GGGAATCGGGAGCCCGCTACATCGGCACGGCGGCCGCAAGCCT	197
			Sequence name: mrnp2ndb:AAA59553	
			Sequence documentation:	
			ID AAA59553 standard; DNA; 16080 BP.	
			AAAS9553;	
			14-NOV-2000 (first entry)	
			DNA clone pCEK C1.27 encoding a human beta-secretase enzyme.	

KM Beta-secretase; beta-amyloid precursor protein; beta-amyloid peptide;  
KW Amyloid plaque component; Alzheimer's disease; amyloidogenic disease;  
XX inhibitor; ss.  
XX Homo sapiens.  
OS  
PN MO200047618-A2.  
XX  
PD 17-AUG-2000.  
XX  
PP 10-FEB-2000; 2000MO-US003819.  
XX  
PR 10-FEB-1999; 99US-0119571P.  
XX  
PA 15-JUN-1999; 99US-0139172P.  
XX  
(PA (ELAN-) ELAN PHARM INC.  
XX  
FI Anderson JP, Basi G, Doane MT, Frigon N, John V, Power M;  
PI Sinha S, Tatsuno G, Tung J, Wang S, Mcconlogue L;  
XX WPI; 2000-533011/48.  
DR  
PT Purified beta-secretase protein used in assays to discover inhibitors  
FT which can be used for the treatment of amyloidogenic diseases e.g.  
XX Alzheimer's disease.  
PS  
SS Disclosure; Fig 13A-E; 121pp; English.  
XX  
CC The specification describes a beta-secretase enzyme. The enzyme cleaves  
CC beta-amyloid precursor protein to produce beta-amyloid peptide. This  
CC enzyme is therefore implicated in the production of amyloid plaque  
CC components which accumulate in the brains of individuals afflicted with  
CC Alzheimer's disease. Inhibitors of beta-secretase are administered to a  
CC mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-  
CC like pathology to test if they maintain or improve cognitive ability or  
CC reduce the plaque burden. The compounds are used for the treatment of  
CC amyloidogenic diseases e.g. Alzheimer's disease. The present sequence  
CC encodes a human beta-secretase enzyme  
SQ Sequence 16080 BP; 3627 A; 4556 C; 3962 G; 3913 T; 0 U; 22 Other;

Alignment of: us-10-726-967a-1 x AAA59553 ..

Alignment segment 1/1: (-)

	Quality:	Score:
Matching Length:	35.00	254
Matching Percent Similarity:	14	14
Total Percent Similarity:	64.29	57.14
Gaps:	0	57.14
Total Percent Identity:		

Alignment:

```

      25 GILYIeArGLEuProLEuARgSerGlyLeuGLyAlAbro          38
      |||||       |||||:::|||||       |||||
1458 GGGATCGGAGACCGCTACATCGGCACGGCGGCCGAGCCT        1417
Sequence name: rmgp2ndb:ABK63758
Sequence documentation:
ID   ABK63758 standard; cDNA; 2158 BP.
AC   ABK63758;
XX
DT   18-JUN-2002 (first entry)
DE
XX
DEFINITION Rat sequence differentially expressed in response to a hepatotoxin #1665
Rat; ss; hepatotoxin; expressed sequence tag; EST; drug screening;
KW differential expression; centrilobular necrosis; steatosis.
XX
XS Rattus norvegicus.
XX
```



PN W0200210453-A2.  
XX  
PD 07-FEB-2002.  
XX  
PF 30-JUL-2001; 2001WO-US023872.  
XX  
PR 31-JUL-2000; 2000US-0222040P.  
PR 02-NOV-2000; 2000US-0244880P.  
PR 11-MAY-2001; 2001US-0290029P.  
PR 15-MAY-2001; 2001US-0290645P.  
PR 22-MAY-2001; 2001US-0292336P.  
PR 06-JUN-2001; 2001US-0295798P.  
PR 13-JUN-2001; 2001US-0297457P.  
PR 19-JUN-2001; 2001US-0298844P.  
PR 09-JUL-2001; 2001US-0303459P.  
XX  
PA (GENE-) GENE LOGIC INC.  
PI Mendrick D, Porter MW, Johnson KR, Castle AL, Elashoff MR;  
XX  
XX MPI; 2002-241625/29.  
DR  
XX Predicting toxic effects of compounds or the progression of these toxic  
PT effects by determining the changes in gene expression in tissues or cells  
PT exposed to the toxin and comparing these to gene expression in unexposed  
PT tissues or cells.  
XX  
XX Claim 1; SEQ ID NO 1665; 239pp; English.  
XX  
XX The invention relates to methods for predicting toxic effects of  
XX compounds or the progression of these toxic effects by determining the  
XX global changes in gene expression in tissues or cells exposed to the  
XX toxin and comparing these to gene expression in unexposed tissues or  
XX cells. Also included are methods of predicting at least one toxic effect  
XX of a compound or progression of a toxic effect, preferably the  
XX hepatotoxicity of a compound, comprising detecting the level of  
XX expression in a tissue or cell sample exposed to the compound of two or  
XX more genes listed in the specification, where differential expression of  
XX the genes is indicative of at least one toxic effect or progression. The  
XX method can also be used to identify an agent which modulates the toxic  
XX response and predict cellular pathways that a compound modulates in a  
XX cell. The methods utilize a set of at least two probes (on a solid  
XX support in kit form), where each of the probes comprises a sequence that  
XX specifically hybridises to a gene listed in the specification, a computer  
XX system comprising a database containing information identifying the  
XX expression level in a tissue or cell sample exposed to a hepatotoxin of a  
XX set of genes comprising at least two genes listed in the specification,  
XX and a user interface to view the information used to present information  
XX identifying the expression level in a tissue or cell of at least one gene  
XX listed in the specification. The method is useful for elucidating global  
XX changes in gene expression and for identifying toxicity markers in  
XX tissues or cell exposed to a known toxin. The genes may be used as  
XX toxicity markers in drug screening and toxicity assays. The genes and  
XX gene expression information may be used as diagnostic markers for the  
XX prediction or identification of the physiological state of tissue or cell  
XX sample that has been exposed to a compound or agent. Hepatotoxicity is  
XX characterized by centrilobular necrosis and steatosis. The present  
XX sequence is an expressed sequence tag (EST) or cDNA derived from a gene  
XX which is differentially expressed in response to a hepatotoxic agent  
XX  
XX Sequence 2158 BP; 458 A; 640 C; 619 G; 441 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x ABK63758 ..  
Alignment segment 1/1: (-)  
Matching Percent 33.00 Quality: 14  
Total Length: 261  
Matching Percent Similarity: 64.29 Matching Percent Identity: 50.00  
Total Percent Similarity: 64.29 Total Percent Identity: 50.00  
Gaps: 0  
Alignment:

23 GlnHisGlyIleArgLeuProLeuArgSerGlyLeuGly 36  
182: CAGCGGGGAGATCGGGCCCTTGTGGGCTGGAGGGCGGG 141  
Sequence name: rngp2ndb:ADB52907  
Sequence documentation:  
ID ADB52907 standard; DNA; 2158 BP.  
XX  
XX ADB52907;  
AC  
XX 04-DEC-2003 (first entry)  
DT  
XX  
DE Primary rat hepatocyte toxicity modelling related gene SEQ ID NO:3449.  
XX  
XX toxic effect; gene expression profile; hepatotoxicity; diagnostic marker;  
XX toxicity marker; toxicity progression; drug screening;  
XX primary rat hepatocyte toxicity modelling; gene; ds.  
OS Rattus norvegicus.  
XX  
XX W02003065993-A2.  
XX  
XX 14-AUG-2003.  
PD  
XX  
XX 04-FEB-2003; 2003WO-US003482.  
XX  
XX 04-FEB-2002; 2002US-0353171P.  
XX 13-MAR-2002; 2002US-063534P.  
XX 08-APR-2002; 2002US-0370248P.  
XX 10-APR-2002; 2002US-0371134P.  
XX 10-APR-2002; 2002US-0371135P.  
XX 10-APR-2002; 2002US-0371150P.  
XX 11-APR-2002; 2002US-0371413P.  
XX 19-APR-2002; 2002US-0373601P.  
XX 19-APR-2002; 2002US-0373602P.  
XX 22-APR-2002; 2002US-0374139P.  
XX 08-MAY-2002; 2002US-0378370P.  
XX 09-MAY-2002; 2002US-0378652P.  
XX 09-MAY-2002; 2002US-0378653P.  
XX 09-MAY-2002; 2002US-0378655P.  
XX 09-JUL-2002; 2002US-0394230P.  
XX 09-JUL-2002; 2002US-0394253P.  
XX 04-SEP-2002; 2002US-0407688P.  
XX 28-JAN-2003; 2003US-0442900P.  
XX  
XX (GENE-) GENE LOGIC INC.  
PI Mendrick D, Porter M, Johnson K, Higgs B, Castle A, Orr M;  
PI Elashoff M;  
XX  
XX MPI; 2003-731472/69.  
DR  
XX  
XX Determining if a compound induces a toxic effect on a tissue or cell, for  
PT identifying hepatotoxic compounds, comprises comparing a gene expression  
PT profile of a tissue or cell sample to a database of Tox mean and non-Tox  
PT mean values.  
XX  
XX Claim 44; SEQ ID NO 3449; 874pp; English.  
XX  
XX The present invention describes a method for determining whether a  
XX compound induces a toxic effect on a tissue or cell. The method comprises  
XX preparing a gene expression profile of a tissue or cell sample exposed to  
XX the compound, and comparing the gene expression profile to a database  
XX comprising data or information on the Tox mean and non-Tox mean value.  
XX The method is useful for predicting or identifying at least one toxic  
XX effect, particularly hepatotoxicity, of a test or unknown compound. The  
XX genes listed in the specification are useful as diagnostic or toxicity  
XX markers for the prediction or identification of the physiological state  
XX of tissue or cell sample that has been exposed to a compound, or to  
XX identify or predict the toxic effects of a compound or agent. These  
XX may also be used as markers for monitoring toxicity progression or for

CC drug screening. The present sequence represents a primary rat hepatocyte  
CC toxicity modelling related gene sequence from the present invention.

XX Sequence 2158 BP; 458 A; 640 C; 619 G; 441 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADB52907 ..

Alignment segment 1/1: (-)

	Quality:	33.00	Score:	261
Matching length:	14		14	
Matching Percent Similarity:	64.29		50.00	
Total Percent Similarity:	64.29		50.00	
Gaps:	0			

Alignment:

```
23 GlnHsglyIleArgLeuProLeuArgSerGlyLeuGlyGly
|||::|||::|||::|||::|||::|||::|||::|||::|||
182 CAGCGGGGGGATCGGGCCCTGTGGGCGCTGGAGGGCGGG 141
```

Sequence name: rngp2ndb:ADP44632

Sequence documentation:

ID ADP44632 standard; mRNA; 3880 BP.

XX ADP44632;

DT 26-AUG-2004 (first entry)

DE Murine beta-site APP cleaving enzyme type 1 (BACE1) mRNA.

XX neurodegenerative disorder; CNS; Parkinson's disease; Alzheimer's;

KM Huntington's; spinocerebellar ataxia type 1;

KM spinocerebellar ataxia type 3; SCA; Machado-Joseph disease;

KM dentatorubral-pallidoluysian atrophy; DRPLA;

KM beta-site APP cleaving enzyme type 1; amyloid precursor protein; BACE1;

KM ASP2; memapsin2; ss; murine; house mouse.

XX Mus musculus.

XX WO2004047872-A2.

XX 10-JUN-2004.

XX 26-NOV-2003; 2003MO-US037650.

XX 26-NOV-2002; 2002US-0429387P.

XX 03-FEB-2003; 2003US-0444614P.

XX (MEDT ) MEDTRONIC INC.

XX Kaemmerer WF;

XX WPI; 2004-441106/41.

XX New medical system comprising an intracranial access device, a mapping

PT means, a small interfering RNA or vector encoding the RNA, and a delivery

PT means, useful for treating a neurodegenerative disorder.

XX Claim 23; SEQ ID NO 22; 228bp; English.

XX The invention relates to a novel medical system for treating a

CC neurodegenerative disorder comprising an intracranial access device, a

CC mapping means for locating a predetermined location in the brain, a

CC deliverable amount of a small interfering RNA (siRNA), or vector encoding

CC the siRNA, and a delivery means. The system of the invention has

CC applications related to the CNS and may be useful for treating a

CC neurodegenerative disorder, such as Parkinson's disease, Alzheimer's

CC disease, Huntington's disease, spinocerebellar ataxia (SCA) types 1 and 3

CC (Machado-Joseph disease) or dentatorubral-pallidoluysian atrophy (DRPLA).

CC The current sequence is that of the murine beta-site APP (amyloid

CC precursor protein) cleaving enzyme type 1 (BACE1; ASP2; memapsin2) mRNA of

CC the invention.

XX Sequence 3880 BP; 893 A; 1083 C; 1022 G; 0 T; 882 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADP44632 ..

Alignment segment 1/1: (-)

	Quality:	33.00	Score:	261
Matching length:	14		14	
Matching Percent Similarity:	64.29		50.00	
Total Percent Similarity:	64.29		50.00	
Gaps:	0			

Alignment:

```
23 GlnHsglyIleArgLeuProLeuArgSerGlyLeuGlyGly
|||::|||::|||::|||::|||::|||::|||::|||
182 CAGCGGGGGGATCGGGCCCTGTGGGCGCTGGAGGGCGGG 141
```

Sequence name: rngp2ndb:AAD17895

Sequence documentation:

ID AAD17895 standard; cDNA; 1287 BP.

XX AAD17895;

DT 10-DEC-2001 (first entry)

DE Human-Asp 2 (b) protein lacking transmembrane domain encoding cDNA.

XX Human; aspartyl protease 2b; Asp2b; amyloid precursor protein; APP;

KM Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;

KM amyloid plaque; neuronal loss; proteolytic; nootropic; neuroprotective;

XX ss.

XX Homo sapiens.

XX Synthetic.

XX Key

FT CDS

FT Location/Qualifiers

FT 1..1287

FT /tag= a

FT /product= "Human-Asp 2 (b) protein lacking transmembrane

FT domain"

XX GB2357767-A.

XX 04-JUL-2001.

XX 22-SEP-2000; 2000GB-00023315.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WO-US020881.

XX 13-OCT-1999; 99US-00416901.

XX 06-DEC-1999; 99US-0169232P.

XX (PHAA ) PHARMACIA & UPJOHN CO.

XX Bienkowski MJ, Gurney M;

XX WPI; 2001-444208/48.

XX P-PsDB; AAB10646.

XX Polypeptide comprising fragments of human aspartyl protease with amyloid

XX precursor protein processing activity and alpha-secretase activity, for

XX identifying modulators useful in treating Alzheimer's disease.

XX Example 10; Page 137; 187pp; English.

XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1

XX proteins which lack transmembrane domain or amino terminal domain or

XX cytoplasmic domain and retains alpha-secretase activity and amyloid

CC protein precursor (APP) processing activity. The proteins of the  
CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which  
CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase  
CC activity, where modulators that increase hu-Asp1 alpha-secretase activity  
CC are useful for treating Alzheimer's disease (AD) which causes progressive  
CC dementia with consequent formation of amyloid plaques, neurofibrillary  
CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful  
CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein  
CC with the substrate under acidic conditions and determining the level of  
CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding  
CC human Asp 2(b) protein lacking a transmembrane (TM) domain which is  
CC generated by the deletion of the C-terminal TM domain and intracellular  
CC domains of human Asp 2(b) protein

SO Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD17895 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	264
Matching length:	11		11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
Gaps:	0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCTCT      147
```

Sequence name: rngp2ndb: AAD13276

Sequence documentation:

ID AAD13276 standard; cDNA; 1287 BP.

AC AAD13276;

DT 23-OCT-2001 (first entry)

XX Human-Asp2(b) deltaTM protein cDNA.

XX Human: aspartyl protease 2b; Asp 2b; beta-amyloid precursor protein; APP;  
XX beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;  
XX neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;  
XX neuroprotective; antisense therapy; Asp2(b) deltaTM protein;  
XX gene therapy; ss.

XX Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers  
XX CDS 1..1287

FT /\*tag= a  
FT /product= "Human Asp2(b) deltaTM protein"

XX WO200150829-A2.

XX 19-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000799.

XX 09-MAY-2001; 2001WO-IB000799.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANK/) YAN R.

XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX PI WO200123533-A2.

DR WPI; 2001-463072/52.

DR P-PSDB; AAE06891.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl  
XX protease 2, lacking Asp2 transmembrane domain and retaining beta  
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2  
XX activity.

PS Example 10; Page 166-167; 1855P; English.

XX The invention relates to human aspartyl proteases (hu-Asp), beta-amyloid  
XX precursor protein (APP) isoforms and their corresponding DNA molecules.  
XX Human aspartyl proteases can act as beta-secretase proteases useful for  
XX treating Alzheimer's disease. APP isoforms are useful for identifying  
XX modulators of amyloid-beta peptide production, for use in designing  
XX therapeutics for the treatment and prevention of Alzheimer's disease,  
XX dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis  
XX and neuronal loss. APP isoforms are also used in methods for identifying  
XX inhibitors and modulators of human Asp2 activity. The invention relates  
XX to a method for identifying agents that modulate the activity of human  
XX aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
XX as a means to screen in cellular assays for the inhibitors of beta- and  
XX gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in  
XX polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
XX Asp nucleic acids in in vitro assays and in Northern and Southern blots.  
XX The present cDNA sequence encodes human aspartyl protease 2b (Hu-Asp2b)  
XX deltaTM protein which is obtained by the deletion of C-terminal  
XX transmembrane and intracellular domains of Hu-Asp2b. Human Asp2b has beta  
XX -secretase activity

SO Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13276 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	264
Matching length:	11		11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
Gaps:	0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCTCT      147
```

Sequence name: rngp2ndb: AAD06768

Sequence documentation:

ID AAD06768 standard; cDNA; 1287 BP.

AC AAD06768;

DT 10-AUG-2001 (first entry)

XX Human aspartyl protease 2 (b) delta TM cDNA.

XX Human: alpha-secretase; amyloid precursor protein; APP; therapy;  
XX Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2; Asp 2;  
XX beta-secretase; chromosome 11q23.3-24.1; mutant; ss.

XX Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers  
XX CDS 1..1287

FT /\*tag= a  
FT /product= "Human aspartyl protease 2 (b) delta TM"

XX WO200123533-A2.

XX 19-JUL-2001.

PD 05-APR-2001.  
 XX 22-SEP-2000; 2000WO-US026080.  
 XX 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99WO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 PR 06-DEC-1999; 99US-0169232P.  
 XX (PMAA) PHARMACIA & UPJOHN CO.  
 PA Gurney M, Bienkowiak MJ;  
 PI WPI; 2001-290516/30.  
 DR P-PSDB; AAE02598.  
 XX  
 PT Enzymes that cleave the alpha-secretase site of the amyloid precursor  
 PT protein, useful for the treatment of Alzheimer's disease.  
 XX  
 PS Example 10; Page 165-166; 189pp; English.  
 XX  
 CC The present invention relates to enzymes for cleaving the alpha-  
 CC secretase site of the amyloid precursor protein (APP) and methods of  
 CC identifying those enzymes. The methods may be used to identify enzymes  
 CC that may be used to cleave the alpha-secretase cleavage site of the APP  
 CC protein. The enzymes may be used to treat or modulate the progress of  
 CC Alzheimer's disease. The present sequence is human aspartyl protease 2  
 CC (Asp 2) (b) delta TM cDNA. The Asp 2 gene from which it is derived is  
 CC located on chromosome 11q23.3-24.1. The Asp 2 has beta-secretase protease  
 CC activity  
 XX  
 SQ Sequence 1287 BP, 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x AAD06768 ..  
 Alignment segment 1/1: (-)  
 Matching Length: 32.00 Total length: 264  
 Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55  
 Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
 Gaps: 0  
 Alignment:  
 27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
 ::::|||||:|||||:|||||:|||||:|||||: 147  
 179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT

Sequence name: rngp2ndb:AA511547  
 Sequence documentation:  
 ID AA511547 standard; cDNA, 1287 BP.  
 XX  
 AC AA511547;  
 XX  
 DT 24-OCT-2001 (first entry)  
 XX  
 DE Human cDNA encoding Human-pro-Asp 2(b) delta TM.  
 XX  
 KW Human; Aspartyl protease; beta-secretase; noctropic; ASP2;  
 KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;  
 KW amyloid-beta; Abeta; Human-pro-Asp 2(b) delta TM; ss; mutant.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 OS  
 FH Key Location/Qualifiers  
 FT CDS 1..1287  
 FT /tag= a  
 FT /product= "Human-pro-Asp 2(b) delta TM"  
 XX  
 PN WO200149098-A2.

XX 12-JUL-2001.  
 PD 09-MAY-2001; 2001WO-IB000798.  
 XX 09-MAY-2001; 2001WO-IB000798.  
 PR 09-MAY-2001; 2001WO-IB000798.  
 XX  
 PA (BIEN/) BIENKOWSKI M J.  
 PA (GURN/) GURNEY M E.  
 PA (HEIN/) HEINRIKSON R L.  
 PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.  
 XX  
 PI Bienkowiak MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 DR WPI; 2001-502549/55.  
 XX  
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.  
 XX  
 PS Disclosure; Page 166-167; 185pp; English.  
 XX  
 CC The invention relates to a purified polypeptide comprising a fragment of  
 CC mammalian aspartyl protease (Asp) 2 protein which lacks the Asp2  
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and  
 CC the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. The invention also details polynucleotides for the Asp proteins  
 CC and vectors expressing them, and a polypeptide (isoform of amyloid  
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or  
 CC its fragment containing an APP cleavage site recognizable by a mammalian  
 CC beta-secretase, and further comprising two lysine residues at the  
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP  
 CC fragment. Also included in the invention are methods of identifying  
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
 CC useful for treating Alzheimer's disease. APP is useful in methods for  
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-  
 CC beta (Abeta) peptide production. APP is also useful in designing  
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP  
 CC comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is  
 CC associated with increased levels of Abeta processing is useful in assays  
 CC relating the Alzheimer's research. The expression vector is useful for  
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp  
 CC oligonucleotides are useful as probes or primers. The probes are useful  
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and  
 CC Southern blots. The present sequence encodes Human-pro- Asp 2(b) delta TM  
 CC protein, which lacks the C-terminal transmembrane domain  
 XX  
 SQ Sequence 1287 BP, 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x AA511547 ..  
 Alignment segment 1/1: (-)  
 Matching Length: 32.00 Total length: 264  
 Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55  
 Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
 Gaps: 0  
 Alignment:  
 27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
 ::::|||||:|||||:|||||:|||||:|||||: 147  
 179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT

Sequence name: rngp2ndb:ABL52487  
 Sequence documentation:  
 ID ABL52487 standard; cDNA, 1287 BP.  
 XX  
 AC ABL52487;

XX 16-JUL-2002 (first entry)  
 DT  
 XX  
 DE Human Asp-2(b)deltaTM nucleotide sequence SEQ ID NO:50.  
 XX  
 KM Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;  
 XX chromosome 11q23.3-24.1; gene; ss.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT CDS 1..1287  
 FT /tag= a  
 FT /product= "Human Asp-2(b)delta TM"  
 XX  
 PN GB2367060-A:  
 PD 27-MAR-2002.  
 XX  
 PF 29-OCT-2001; 2001GB-00025934.  
 XX  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99MO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 PR 06-DEC-1999; 99US-0169232P.  
 PR 22-SEP-2000; 2000GB-00023315.  
 XX  
 PA (PHAA ) PHARMACIA & UPJOHN CO.  
 XX  
 PI Bienkowskei MJ, Gurney M;  
 DR WPI; 2002-397167/43.  
 DR P-PSDB; ABB78607.  
 XX  
 PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.  
 XX  
 PS Example 10; Page 137; 182pp; English.  
 XX  
 CC The present invention describes a human aspartyl protease 1 (hu-Asp1)  
 CC substrate (1) which comprises a peptide of no more than 50 amino acids,  
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
 CC Glu-Pro. Also described are: (1) a method (ii) for assaying hu-Asp1  
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1  
 CC proteolytic activity; (2) a purified polynucleotide (iii) comprising a  
 CC nucleotide sequence that hybridizes under stringent conditions to the non  
 CC coding strand complementary to a defined 1804 nucleotide sequence (see  
 CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1  
 CC proteolytic activity and lacks nucleotides encoding a transmembrane  
 CC domain; (3) a purified polynucleotide (iii') comprising a sequence that  
 CC hybridizes under stringent conditions to (iii) (the nucleotide sequence  
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding  
 CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (iv)  
 CC comprising (iii) or (iii') and (5) a host cell (v) transformed or  
 CC transduced with (iii), (iii') and/or (iv). The hu-Asp1 protease  
 CC substrate (1) may be used as an enzyme substrate in assays to detect  
 CC aspartyl protease activity, (ii) and therefore diagnose diseases  
 CC associated with aberrant hu-Asp1 expression and activity such as  
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
 CC sequence encodes human Asp-2(b)deltaTM, which is given in an example from  
 CC the present invention  
 XX  
 SQ Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ABL52487 ..  
 Alignment segment 1/1: (-)  
 Quality: 32.00  
 Matching length: 11  
 Score: 264  
 Total length: 11

Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55  
 Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
 Gaps: 0  
 Alignment:  
 27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
 179 AGGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147  
 Sequence name: rngp2nrb:ADJ94362  
 Sequence documentation:  
 ID ADJ94362 standard; cDNA; 1287 BP.  
 XX  
 AC ADJ94362;  
 XX  
 DT 03-JUN-2004 (first entry)  
 XX  
 DE Human-pro-Asp-2(b)deltaTM cDNA.  
 XX  
 KM Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);  
 KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;  
 KM neurotropic; neuroprotective; amyloid beta; mutant.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 PN US6706485-B1.  
 XX  
 PD 16-MAR-2004.  
 XX  
 PF 12-APR-2000; 2000US-00548376.  
 XX  
 PR 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99MO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 XX  
 PA (PHAA ) PHARMACIA & UPJOHN CO.  
 XX  
 PI Gurney ME, Bienkowskei MJ, Heinrichson RL, Parodi LA, Yan R;  
 DR WPI; 2004-236722/22.  
 DR P-PSDB; ADJ94363.  
 XX  
 PT Identifying agents that modulate activity of Asp2 aspartyl protease  
 PT useful for treating or preventing Alzheimer's disease involves comparing  
 PT APP processing activity of protease in presence and absence of test  
 PT agent.  
 XX  
 XX Example 10; SEQ ID NO 50; 109pp; English.  
 XX  
 CC The invention relates to identifying agents that modulate activity of  
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 CC precursor protein (APP) in the presence and absence of a test agent,  
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptides, an isolated  
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy terminus amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw  
 CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of

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CC beta-secretase) and polynucleotides that encode the APP proteins. The
CC method is useful for identifying agents that modulate the activity
CC (amyloid precursor protein processing activity) of Asp2 aspartyl
CC protease. Preferably, the method is useful for identifying agents that
CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid
CC precursor protein processing, are useful for treating or preventing
CC Alzheimer's disease. The present sequence encodes an aspartyl protease
CC mutant construct (e.g. lacking a transmembrane domain and/or including
CC caspase cleavage site) used to investigate the cleavage activity of Asp
CC proteins.
XX
SQ Sequence 1287 BP; 271 A; 370 C; 384 G; 262 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ADJ94362 ..
Alignment segment 1/1: (-)
Matching Length: 32.00 Bscore: 264
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0
Alignment:
27 ArgLeuProLeuArgSerGlyLeuGIgLYAlA 37
:::|||||::|::|::|::|
179 AGCTCCTCCCCCTCGGCCGGCTCTCTCGGCCTC 147
Sequence name: rnsnp2nb:ADO50458
Sequence documentation:
ID ADO50458 standard; DNA; 1287 BP.
XX
AC ADO50458;
XX
DT 29-JUL-2004 (first entry)
XX
DE Human Asp2(b)deltatm mutant DNA.
XX
KW Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
KW Alzheimer's disease; gene therapy; human; mutant; gene; ds.
XX
OS Homo sapiens.
XX
SY Synthetic.
XX
FH Key Location/Qualifiers
FT CDS 1..1287
FT /tag=a
FT /product="Human Asp2(b) mutant protein"
XX
FN US6737510-B1.
XX
PN 18-MAY-2004.
XX
PD 12-APR-2000; 2000US-00548373.
XX
PF 24-SEP-1998; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99MO-US020881.
PR 13-OCT-1999; 99US-00416901.
XX
PA (PHMA ) PHARMACIA & UPJOHN CO.
XX
PI Gurney ME, Bienkowski MJ, HeintzKoon RL, Parodi LA, Yan R;
XX
DR WPI; 2004-387112/36.
XX
DR P-PADB; ADO50459.
XX
PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
PT involved in processing amyloid precursor protein into amyloid beta,
PT useful in preparing a composition for treating or preventing Alzheimer's
PT

```

[illegible]

[illegible]

```
DR      MPI: 2000-303209/26.
XX      P-PeDB; AAy88433.
PT      New enzyme designated human aspartase useful in research into Alzheimer's
PR      Disease is capable of cleaving amyloid protein precursor at the beta
PI      secretase site to produce amyloid beta peptide.
PS      Example 9, Fig 8, 183pp; English.
XX
XX      This sequence represents a modified version of the human aspartase 2
CC      (Asp2) nucleotide sequence. The invention is used in the bacterial
CC      expression of human Aspyl. The invention relates to a protease (e.g.
CC      Asp2) capable of cleaving the beta secretase site of amyloid precursor
CC      protein (APP). The protease contains a sequence encoding the amino acid
CC      sequence DTG..and a sequence encoding DSG or DTG separated by 100-300
CC      amino acids. When mutated the APP gene causes an autosomal dominant form
CC      of Alzheimer's disease. APP localises to the cell surface membrane and
CC      have a single C-terminal transmembrane domain. Proteolytic processing of
CC      APP produces the amyloid beta protein, which is possibly very important
CC      in Alzheimer's disease. The invention includes a nucleotide sequence
CC      encoding the protease, a vector containing the nucleotide sequence, and a
CC      cell line comprising the vector. Methods for screening for inhibitors of
CC      beta secretase activity are also given in the invention. The human
CC      aspartase protein and nucleotide sequences and the methods for
CC      identifying inhibitors of the protease, are useful in the treatment of
CC      and research in Alzhaimer's disease. (Updated on 06-AUG-2003 to
CC      correct OS field.) (Updated on 15-SEP-2003 to standardise OS field)
XX
SQ      Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x AAA15670 ..
Alignment segment 1/1: (-)
Matching length: 32.00 Total length: 264
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0
Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::: |||||:::
119 AMAGTCGCCCTCCGGCGGCCTCCTCGGCTCT 87
Sequence name: rmp2ndb:AA11713
Sequence documentation:
ID   AA11713 standard; DNA; 1302 BP.
XX
XX   AC   AA11713;.
XX
DT   11-SEP-2003 (revised)
DT   24-OCT-2001 (first entry)
XX
XX   DNA encoding T7-human asparty1 protease 2a deltatM (low GC).
DE
XX
KW   Human, asparty1 protease 1; Asp-1; neurotropic; neuroprotective;
KM   asparty1 protease 2; Asp2; amyloid protein precursor; APP;
XX   beta-secretase; Alzheimer's disease; ds.
XX
OS   Homo sapiens.
OS   Enterobacteria phage T7.
XX
FH   Key Location/Qualifiers
FT   CDS 1..1302
FT     /*tag= a
XX     /product= "T7-Asparty1 protease-2a delta TM (low GC)"
PM
XX   WO200149097-A2.
XX
PD   12-JUL-2001.
```



XX 09-MAY-2001; 2001WO-IB000797.  
 PF 09-MAY-2001; 2001WO-IB000797.  
 PR 09-MAY-2001; 2001WO-IB000797.  
 XX (BIEN/) BIENKOWSKI M J.  
 XX (GURN/) GURNEY M E.  
 PA (HEIN/) HEINRIKSON R L.  
 PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.  
 XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 PI WPI; 2001-502548/55.  
 XX P-PSDB; AAU07113.  
 DR P-PSDB; AAU07113.  
 XX Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.

Example 9; Fig 8; 185pp; English.

XX The invention relates to a novel purified polypeptide comprising a  
 CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. Also included is an isoform of amyloid protein precursor (APP)  
 CC comprising the amino acid sequence of a APP or its fragment containing an  
 CC APP cleavage site recognizable by a mammalian beta-secretase, and further  
 CC comprising two lysine residues at the carboxyl terminus of the amino acid  
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used  
 CC for assaying for modulators of beta-secretase activity; identifying  
 CC agents that inhibit the APP processing activity of human Asp2 aspartyl  
 CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2  
 CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.  
 CC Agents identified by the above methods are useful for treating  
 CC Alzheimer's disease; for identifying modulators of amyloid-beta (Abeta)  
 CC peptide production; and for use in designing therapeutics for the  
 CC treatment or prevention of Alzheimer's disease. Probes and primers  
 CC derived from APP nucleic acid sequences are useful for detecting Hu-Asp  
 CC nucleic acids in vitro assays and in Northern and Southern blots. The  
 CC present sequence represents the coding sequence of TC-human Asp-2a delta  
 CC TM (low GC) construct which has a T7 tag, has the GC content of the 5'  
 CC sequence reduced by site-directed mutagenesis, and lacks the  
 CC transmembrane domain. This construct was used for bacterial expression  
 CC and purification of human Asp2a. (Updated on 11-SEP-2003 to standardise  
 CC OS field)

XX SQ Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11713 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	264
Matching length:	11			
Matching Percent Similarity:	81.82			
Total Percent Similarity:	81.82			
Gaps:	0			
Total Percent Identity:				54.55

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||::|::|::|::|::|::|::|::|::|
119 AAGCTGCCCTCCGCGCGGCTCTCTCGGCTCT 87

```

Sequence name: trngp2ndb:AAD17876

Sequence documentation:

ID AAD17876 standard; cDNA; 1302 BP.  
 XX  
 AC AAD17876;

XX 10-DEC-2001 (first entry)  
 DT Human-pro-Asp 2(a) protein lacking TM domain (low GC) encoding cDNA.  
 DE Human; aspartyl protease 1; Asp1; amyloid precursor protein; APP;  
 XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;  
 KW amyloid plaque; neuronal loss; proteolytic; neuroprotective;  
 KM Human-pro-Asp 2(a) protein; ss.  
 XX Homo sapiens.  
 OS Synthetic.  
 OS  
 XX Key Location/Qualifiers  
 FT CDS 1..1302  
 FT /tag= a  
 FT /product= "Human-pro-Asp 2(a) protein lacking  
 XX transmembrane domain"

GB235767-A.

04-UTL-2001.

22-SEP-2000; 2000GB-00023315.

XX 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99WO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 PR 06-DEC-1999; 99US-0169232P.

(PHMA) PHARMACIA & UPJOHN CO.

PI Bienkowski MJ, Gurney M;

DR WPI; 2001-444208/48.

DR P-PSDB; AAE10640.

PT Polypeptide comprising fragments of human aspartyl protease with amyloid  
 PT precursor protein processing activity and alpha-secretase activity, for  
 PT identifying modulators useful in treating Alzheimer's disease.

XX Example 9; Fig 8; 187pp; English.

XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1  
 CC proteins which lack transmembrane domain or amino terminal domain or  
 CC cytoplasmic domain and retains alpha-secretase activity and amyloid  
 CC protein precursor (APP) processing activity. The proteins of the  
 CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which  
 CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase  
 CC activity, where modulators that increase hu-Asp1 alpha-secretase activity  
 CC are useful for treating Alzheimer's disease (AD) which causes progressive  
 CC dementia with consequent formation of amyloid plaques, neurofibrillary  
 CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful  
 CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein  
 CC with the substrate under acidic conditions and determining the level of  
 CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding  
 CC human-pro-Asp 2(a) protein lacking a transmembrane (TM) domain (low GC)  
 CC which is generated from human Asp 2(a) protein by the deletion of 178 C-  
 CC terminal transmembrane domain and change of degenerate codons bases in 15  
 CC amino acid positions from G/C to A/T to reduce the GC content

SQ Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD17876 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	264
Matching length:	11			
Matching Percent Similarity:	81.82			
Total Percent Similarity:	81.82			
Gaps:	0			
Total Percent Identity:				54.55



## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
 :::::::::::::::::::::  
 119 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCTC 87

Sequence name: rngp2ndb:AAD13032

Sequence documentation:

ID AAD13032 standard; cDNA; 1302 BP.

XX AAD13032;

XX 23-OCT-2001 (first entry)

XX Human-pro-Asp2(a) delcATM (low GC) protein cDNA.

XX Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;

XX beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;

XX neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotropic;

XX neuroprotective; antisense therapy; pro-Asp2(a) delcATM protein;

XX gene therapy; ss.

XX Homo sapiens.

XX Synthetic.

XX Key

XX CDS

XX 1. .1302

XX /tag= a

XX /product= "Human-pro-Asp2(a) delcATM (low GC) protein"

XX WO200150829-A2.

XX 19-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000799.

XX 09-MAY-2001; 2001WO-IB000799.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-483072/52.

XX P-PSDB; AAE06870.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

XX protease 2, lacking Asp2 transmembrane domain and retaining beta

XX secretase activity of Asp2 useful for identifying inhibitors of Asp2

XX activity.

XX Example 9; Fig 8; 185pp; English.

XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid

CC The present cDNA sequence encodes Human-pro-aspartyl protease 2a (Asp2a)

CC delcATM (low GC) protein which is obtained by the deletion of C-terminal

CC transmembrane domain and change of degenerate codons bases in 15 amino

CC acid positions from G/C to A/T in the Hu-Asp2a. Human Asp2a has beta-

CC secretase activity

XX Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

SO

Alignment of: us-10-726-967a-1 x AAD13032 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
 :::::::::::::::::::::  
 119 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCTC 87

Sequence name: rngp2ndb:AAD06750

Sequence documentation:

ID AAD06750 standard; cDNA; 1302 BP.

XX AAD06750;

XX 10-AUG-2001 (first entry)

XX Human-pro-Asp-2(a) delcATM protein cDNA.

XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;

XX Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp2a;

XX beta-secretase; Asp-2a delta TM; ss.

XX Homo sapiens.

XX Synthetic.

XX Key

XX CDS

XX 1. .1302

XX /tag= a

XX /product= "Human-pro-Asp-2(a) delta TM protein"

XX WO200123533-A2.

XX 05-APR-2001.

XX 22-SEP-2000; 2000WO-US026080.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WO-US020881.

XX 13-OCT-1999; 99US-00416901.

XX 06-DEC-1999; 99US-0169232P.

XX (PHAA ) PHARMACIA &amp; UPJOHN CO.

XX Gurney M, Bienkowski MJ;

XX WPI; 2001-290516/30.

XX P-PSDB; AAE02592.

XX Enzymes that cleave the alpha-secretase site of the amyloid precursor

protein, useful for the treatment of Alzheimer's disease.

XX Example 9; Page 155; 189pp; English.

XX The present invention relates to enzymes for cleaving the alpha-

XX secretase site of the amyloid precursor protein (APP) and methods of

XX identifying those enzymes. The methods may be used to identify enzymes

CC that may be used to cleave the alpha-secretase cleavage site of the APP  
CC protein. The enzymes may be used to treat or modulate the progress of  
CC Alzheimer's disease. The present sequence is a cDNA encoding human  
CC Aspartyl protease 2a (Asp-2a) deltatm protein which is obtained by  
CC deleting the transmembrane domain and adding a T7 tag at the N-terminal  
CC end. This sequence has beta-secretase protease activity. Note: The  
CC present sequence is also shown in figure 8 of the specification, but  
CC lacks nucleotides at its 3' end. This sequence shown in figure 8 has a  
CC stop codon at its 3' end

XX Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD06750 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	264
Matching Percent	Similarity:	81.82	Total length:	11
Total Percent	Similarity:	81.82	Matching Percent	Identity:
	Gaps:	0	Total Percent	Identity:
				54.55

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::|::|
119 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 87
```

Sequence name: trngp2ndb:AA511528

Sequence documentation:

ID AA511528 standard; cDNA; 1302 BP.

XX AA511528;

XX 24-OCT-2001 (first entry)

XX Human cDNA encoding Human-pro-Asp 2(a) delta TM (low GC).

XX Human; Aspartyl protease; beta-secretase; neurotic; Asp2;  
KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;  
KW amyloid-beta; Abeta; ss; Human-pro-Asp 2(a) delta TM (low GC).

XX Homo sapiens.  
OS Synthetic.

XX Key Location/Qualifiers  
FT CDS 1..1302  
FT /tag= a  
FT /product= "Human-pro-Asp 2(a) delta TM (low GC)"

XX MO200149098-A2.

XX 12-JUL-2001.

XX 09-MAY-2001; 2001MO-IB000798.

XX 09-MAY-2001; 2001MO-IB000798.

XX (BIEN/) BIENKOWSKI M J.  
XX (GURN/) GURNEY M E.  
XX (HEIN/) HEINRIKSON R L.  
XX (PARO/) PARODI L A.  
XX (YANR/) YAN R.

XX PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX DR WPI; 2001-502549/55.

XX DR P-PSDB; AAU06614.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl  
PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

PT activity.

XX Example 9; Fig 8; 185bp; English.

XX The invention relates to a purified polypeptide comprising a fragment of  
XX mammalian aspartyl protease (Asp) 2 protein which lacks the Asp2  
XX transmembrane domain and the Asp2 protein, and where the polypeptide and  
XX the fragment retain the beta-secretase activity of the mammalian Asp2  
XX protein. The invention also details polynucleotides for the Asp proteins  
XX and vectors expressing them, and a polypeptide (isoform of an APP or  
XX protein precursor (APP)) comprising the amino acid sequence of an APP or  
XX its fragment containing an APP cleavage site recognizable by a mammalian  
XX beta-secretase, and further comprising two lysine residues at the  
XX carboxyl terminus of the amino acid sequence of the mammalian APP or APP  
XX fragment. Also included in the invention are methods of identifying  
XX modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
XX useful for treating Alzheimer's disease. APP is useful in methods for  
XX identifying inhibitors or modulators of human Asp2 activity and amyloid-  
XX beta (Abeta) peptide production. APP is also useful in designing  
XX therapeutics for the treatment or prevention of Alzheimer's disease. APP  
XX comprising the Asp-Sw-beta-secretase peptide sequence (NMDA), which is  
XX associated with increased levels of Abeta processing is useful in assays  
XX relating the Alzheimer's research. The expression vector is useful for  
XX recombinantly expressing APP. Nucleic acids that hybridize to APP  
XX oligonucleotides are useful as probes or primers. The probes are useful  
XX for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and  
XX Southern blots. The present sequence encodes Human-pro-Asp 2(a) delta TM  
XX (low GC), a synthetic version of Asp 2(a) whose GC content has been  
XX altered to facilitate expression in E.coli

XX Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AA511528 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	264
Matching length:	11	Total length:	11	
Matching Percent	Similarity:	81.82	Matching Percent	Identity:
Total Percent	Similarity:	81.82	Total Percent	Identity:
	Gaps:	0		54.55

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::|::|
119 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 87
```

Sequence name: trngp2ndb:ABL52468

Sequence documentation:

ID ABL52468 standard; cDNA; 1302 BP.

XX ABL52468;

XX 16-JUL-2002 (first entry)

XX Human-pro-Asp-2(a) deltatm (low GC) nucleotide sequence SEQ ID NO:25.

XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;  
KW amyloid precursor protein; APP; gene; ss.

XX Homo sapiens.

XX Key Location/Qualifiers  
FT CDS 1..1302  
FT /tag= a  
FT /product= "human-pro-Asp-2(a) deltatm (low GC)"

XX GB2367060-A.

XX 27-MAR-2002.



Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82 Total Percent Identity: 54.55

Gaps: 0

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::|::|
119 AAGCTGCCCCCTCCGCGCGCTCCTCGGCTCT 87
```

Sequence name: rngp2ndb:AD050433

Sequence documentation:

ID AD050433 standard; DNA; 1302 BP.

AC AD050433;

DT 29-JUL-2004 (first entry)

DE Human-pro-Asp-2(a)deltaTM mutant DNA.

XX Aspartyl protease; Asp, beta secretase; amyloid precursor protein; APP;

KM Alzheimer's disease; gene therapy; human; gene; mutant; ds.

XX Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1302

FT /tag= a /product= "Human-pro-Asp-2(a)deltaTM mutant protein"

PN US6737510-B1.

PD 18-MAY-2004.

PF 12-APR-2000; 2000US-00548373.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA) PHARMACIA & UPJOHN CO.

PA Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

PI WPI; 2004-387112/36.

DR P-PSDB; AD050434.

XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG

PT involved in processing amyloid precursor protein into amyloid beta,

PT useful in preparing a composition for treating or preventing Alzheimer's

PT disease.

XX Example 9; SEQ ID NO 25; 108bp; English.

XX The invention relates to a method for identifying an agent that decreases

XX the protease activity of the aspartyl protease (Asp) polypeptide. It also

XX provides enzyme and enzymatic procedures for cleaving the beta secretase

XX cleavage site of the amyloid precursor protein (APP). The invention is

XX useful in preparing a composition for treating or preventing Alzheimer's

XX disease. It is also useful in gene therapy. The present sequence is human

XX -pro-Asp-2(a)deltaTM mutant DNA. This sequence is used to illustrate the

XX method of the invention.

XX Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;

XX Alignment of: us-10-726-967a-1 x AD050433 ..

XX Alignment segment 1/1: (-)

Quality: 32.00  
Matching length: 11  
Total length: 264  
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82 Total Percent Identity: 54.55

Gaps: 0

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::|::|
119 AAGCTGCCCCCTCCGCGCGCTCCTCGGCTCT 87
```

Sequence name: rngp2ndb:ADR75346

Sequence documentation:

ID ADR75346 standard; DNA; 1302 BP.

AC ADR75346;

DT 18-NOV-2004 (first entry)

DE Human-pro-Asp-2(a)deltaTM mutant DNA.

XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;

KM chromosome identification; Alzheimer's disease; human; mutant; gene; ds.

XX Homo sapiens.

OS Synthetic.

XX Key Location/Qualifiers

FT CDS 1..1302

FT /tag= a /product= "Human-pro-Asp-2(a)deltaTM mutant protein"

PN US2004166507-A1.

PD 26-AUG-2004.

PF 29-AUG-2003; 2003US-00652045.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (GURN) GURNEY M E.

PA (BIEN) BIENKOWSKI M J.

PA (HEIN) HEINRIKSON R L.

PA (PARO) PARODI L A.

PA (YANR) YAN R.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

PI WPI; 2004-624916/60.

DR P-PSDB; ADR75347.

XX Novel purified/isolated polynucleotide encoding polypeptide having

XX aspartyl protease activity involved in processing amyloid precursor

XX protein into amyloid beta, useful in identifying agent decreasing

XX activity of aspartyl protease.

XX Example 9; SEQ ID NO 25; 107bp; English.

XX The invention relates to nucleic acid sequences encoding aspartyl

XX protease (Asp) polypeptides having aspartyl protease activity involved in

XX processing amyloid precursor protein (APP) into amyloid beta. The

XX invention also relates to a method for identifying an agent that

XX decreases the protease activity of the Asp. Asp DNA is useful in

XX chromosome identification and in identifying the relationship between

XX on a human chromosome and in identifying the relationship between

XX and diseases (particular gene responsible for causing diseases). It is

XX also useful for identifying candidates to modulate the progression of

XX Alzheimer's disease. Asp is useful in raising antibodies that are useful

CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The  
CC present sequence is the human-pro-Asp-2(a)deltaTM mutant DNA. This  
CC sequence is used to illustrate the method of the invention.  
SQ Sequence 1302 BP; 281 A; 367 C; 370 G; 284 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x ADR75346 ..  
Alignment segment 1/1: (-)  
Quality: 32.00 Score: 264  
Matching length: 11 Total length: 11  
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
Gaps: 0  
Alignment:  
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
119 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 87  
Sequence name: rngp2ndb:AA511733  
Sequence documentation:  
ID AA511733 standard; DNA; 1305 BP.  
XX  
AC AA511733;  
XX  
DT 09-SEP-2004 (revised)  
DT 24-OCT-2001 (first entry)  
XX  
DE DNA encoding human aspartyl protease 2b deltaTM (His)6.  
XX  
KW Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;  
KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;  
KM beta-secretase; Alzheimer's disease; ds.  
XX  
OS Homo sapiens.  
OS Unidentified.  
XX  
FH Key CDS Location/Qualifiers  
FT 1..1305  
FT /\*tag= a  
FT /product= "Human Aspartyl protease-2b delta TM (His)6"  
FT /transl\_except= (pos:1285..1287, aa:His)  
FT /transl\_except= (pos:1288..1290, aa:His)  
FT /transl\_except= (pos:1291..1293, aa:His)  
FT /transl\_except= (pos:1294..1296, aa:His)  
FT /transl\_except= (pos:1297..1299, aa:His)  
FT /transl\_except= (pos:1300..1302, aa:His)  
XX  
PN MO200149097-A2.  
XX  
PD 12-JUL-2001.  
XX  
PF 09-MAY-2001; 2001MO-IB000797.  
XX  
PR 09-MAY-2001; 2001MO-IB000797.  
XX  
PA (BIEN/) BIENKOWSKI M J.  
PA (GURN/) GURNEY M E.  
PA (HEIN/) HEINRIKSON R L.  
PA (PARO/) PARODI L A.  
PA (YANR/) YAN R.  
XX  
PI Blenkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
DR WPI; 2001-502548/55.  
DR P-PSDB; AAU07220.  
XX  
PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
PT protease 2, lacking Asp2 transmembrane domain and retaining beta

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
PT activity.  
XX  
PS Claim 149, Page 166-169; 185pp; English.  
XX  
XX The invention relates to a novel purified polypeptide comprising a  
CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
CC and the fragment retain the beta-secretase activity of the mammalian Asp2  
CC protein. Also included is an isoform of a APP or its fragment containing an  
CC APP cleavage site recognizable by a mammalian beta-secretase, and further  
CC comprising two lysine residues at the carboxyl terminus of the amino acid  
CC sequence of the mammalian APP or APP fragment. The polypeptides are used  
CC for assaying for modulators of beta-secretase activity; identifying  
CC agents that inhibit the APP processing activity of human Asp2 aspartyl  
CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2  
CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.  
CC Agents identified by the above methods are useful for treating  
CC Alzheimer's disease; and for identifying modulators of amyloid-beta  
CC (Abeta) peptide production, for use in designing therapeutics for the  
CC treatment or prevention of Alzheimer's disease. Probes and primers  
CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp  
CC nucleic acids in in vitro assays and in Northern and Southern blots. The  
CC present sequence represents the coding sequence of human Asp-2b delta  
CC TM(His)6 construct which has a 6 histidine tag and lacks the  
CC transmembrane domain. This construct was used for bacterial expression  
CC and purification of human Asp2b  
XX  
CC Revised record issued on 09-SEP-2004 : Correction to Feature Table Key  
XX  
SQ Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x AA511733 ..  
Alignment segment 1/1: (-)  
Quality: 32.00 Score: 264  
Matching length: 11 Total length: 11  
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
Gaps: 0  
Alignment:  
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147  
Sequence name: rngp2ndb:AA17896  
Sequence documentation:  
ID AAD17896 standard; cDNA; 1305 BP.  
XX  
AC AAD17896;  
XX  
DT 10-DEC-2001 (first entry)  
XX  
DE Human-Asp 2(b) lacking TM domain (His)6 protein encoding cDNA.  
XX  
KW Human; aspartyl protease 2b; Asp2b; amyloid precursor protein; APP;  
KM Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;  
KM amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;  
KM ss.  
XX  
OS Homo sapiens.  
OS Synthetic.  
XX  
FH Key CDS Location/Qualifiers  
FT 1..1305  
FT /\*tag= a  
FT /product= "Human-Asp 2(b) lacking transmembrane domain  
FT (His)6 protein"

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FT FT /transl_except= (pos:1285..1287, aa:His)
FT FT /transl_except= (pos:1288..1290, aa:His)
FT FT /transl_except= (pos:1291..1293, aa:His)
FT FT /transl_except= (pos:1294..1296, aa:His)
FT FT /transl_except= (pos:1297..1299, aa:His)
FT FT /transl_except= (pos:1300..1302, aa:His)
PN GB2357767-A.
XX
XX
XX 04-JUL-2001.
XX
XX
XX 22-SEP-2000; 2000GB-00023315.
XX
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX (PHMA ) PHARMACIA & UPJOHN CO.
XX
XX Bienkowski MJ, Gurney M;
XX WPI: 2001-444208/48.
XX P-PSDB; AAE10647.
XX
XX Polypeptide comprising fragments of human aspartyl protease with amyloid
XX precursor protein processing activity and alpha-secretase activity, for
XX identifying modulators useful in treating Alzheimer's disease.
XX
XX Example 10; Page 138; 187pp; English.
XX
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX proteins which lack transmembrane domain or amino terminal domain or
XX cytoplasmic domain and retains alpha-secretase activity and amyloid
XX precursor precursor (APP) processing activity. The proteins of the
XX invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX activity, where modulators that increase hu-Asp1 alpha-secretase activity
XX are useful for treating Alzheimer's disease (AD) which causes progressive
XX dementia with consequent formation of amyloid plaques, neurofibrillary
XX tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
XX with the substrate under acidic conditions and determining the level of
XX hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
XX human Asp 2(b) lacking a transmembrane (TM) domain (His)6 protein which
XX is generated from human Asp 2(b) protein by the deletion of its C-
XX terminal TM domain and addition of hexa-histidine tag at its C-terminus
XX
XX Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD17896 ..
XX
XX Alignment segment 1/1: (-)
XX
XX Matching length: 32.00
XX Matching Percent: 81.82
XX Total length: 264
XX Total Similarity: 81.82
XX Total Percent Identity: 54.55
XX Gaps: 0
XX Total Percent Identity: 54.55
XX
XX Alignment:
XX
XX 27 ArgLeuProlLeuArgSerGlyLeuGlyGlyAla 37
XX ::::::::::::::::::::: 147
XX 179 AAGCGCCCTTCGCGCCGCGCTCTCGGCTCT
XX
XX Sequence name: rngp2ndb:AAD13277
XX
XX Sequence documentation:
XX ID AAD13277 standard; cDNA; 1305 BP.
XX
XX AC AAD13277;
```

```
XX
XX 23-OCT-2001 (first entry)
XX
XX Human-Asp2(b) deltatm (His)6 protein cDNA.
XX
XX Human, aspartyl protease 2b; Asp 2b; beta-amyloid precursor protein; APP;
XX beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
XX neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
XX neuroprotective; antisense therapy; Asp2(b) deltatm (His)6 protein;
XX gene therapy; ss.
XX
XX Homo sapiens.
XX
XX OS
XX
XX Key Location/Qualifiers
XX CDS 1..1305
XX /tag= a
XX /product= "Human Asp2(b) deltatm (His)6 protein"
XX
XX W0200150829-A2.
XX
XX 19-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000799.
XX
XX 09-MAY-2001; 2001WO-IB000799.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEIRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heirrikson RL, Parodi LA, Yan R;
XX WPI: 2001-483072/52.
XX P-PSDB; AAE06892.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 10; Page 168-169; 185pp; English.
XX
XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX precursor protein (APP) isoforms and their corresponding DNA molecule.
XX Human aspartyl proteases can act as beta-secretase proteases useful for
XX treating Alzheimer's disease. APP isoforms are useful for identifying
XX modulators of amyloid-beta peptide production, for use in designing
XX therapeutics for the treatment and prevention of Alzheimer's disease,
XX dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX and neuronal loss. APP isoforms are also used in methods for identifying
XX inhibitors and modulators of human Asp2 activity. The invention relates
XX to a method for identifying agents that modulate the activity of human
XX aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX as a means to screen in cellular assays for the inhibitors of beta- and
XX gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX Asp nucleic acids in in vitro assays and in Northern and Southern blots.
XX The present cDNA sequence encodes Human aspartyl protease 2b (Hu-Asp2b)
XX deltatm (His)6 protein which is obtained by the deletion of C-terminal
XX transmembrane domain and addition of a hexa-histidine tag at the C-
XX terminal end of Hu-Asp2b. Human Asp2b has beta-secretase activity
XX
XX Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD13277 ..
XX
XX Alignment segment 1/1: (-)
XX
XX Matching length: 32.00
XX Matching Percent: 81.82
XX Total length: 264
XX Total Similarity: 81.82
XX Total Percent Identity: 54.55
XX Gaps: 0
XX Total Percent Identity: 54.55
```





CC protein precursor (APP) comprising the amino acid sequence of an APP or  
 CC its fragment containing an APP cleavage site recognizable by a mammalian  
 CC beta-secretase, and further comprising two lysine residues at the  
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP  
 CC fragment. Also included in the invention are methods of identifying  
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
 CC useful for treating Alzheimer's disease. APP is useful in methods for  
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-  
 CC beta (Aβeta) peptide production. APP is also useful in designing  
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP  
 CC comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is  
 CC associated with increased levels of Aβeta processing is useful in assays  
 CC relating the Alzheimer's research. The expression vector is useful for  
 CC recombinantly expressing APP. Nucleic acids that hybridise to Asp  
 CC oligonucleotides are useful as probes or primers. The probes are useful  
 CC for detecting hu-Asp nucleic acids in *in vitro* assays and in Northern and  
 CC Southern blots. The present sequence encodes Human-pro-Asp 2(b) delta TM  
 CC protein, which lacks the C-terminal transmembrane domain and has a His  
 CC tag to aid purification

SQ Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11548 ..

Alignment segment 1/1: (-)

Matching Percent	Quality:	Score:
11	32.00	264
81.82	11	11
81.82	54.55	54.55
0	54.55	54.55

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT  147

```

Sequence name: rngp2ndb:ABL52488

Sequence documentation:

ID ABL52488 standard; CDNA; 1305 BP.

AC ABL52488;

DT 16-JUL-2002 (first entry)

DE Human Asp-2(b) deltaTM(His)6 nucleotide sequence SEQ ID NO:52.

KW Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;

KM Chromosome 11q23.3-24.1; gene; ss.

OS Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1305

FT /tag= a

FT /product= "Human Asp-2(b) deltaTM(His)6"

FT /transl\_except= (pos:1285..1287,aa:His)

FT /transl\_except= (pos:1288..1290,aa:His)

FT /transl\_except= (pos:1291..1293,aa:His)

FT /transl\_except= (pos:1294..1296,aa:His)

FT /transl\_except= (pos:1297..1299,aa:His)

FT /transl\_except= (pos:1300..1302,aa:His)

PN GB2367060-A.

PD 27-MAR-2002.

PF 29-OCT-2001; 2001GB-00025934.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.  
 PR 13-OCT-1999; 99US-00415901.  
 PR 06-DEC-1999; 99US-0169232P.  
 PR 22-SEP-2000; 2000GB-00023315.  
 PA (PHMA) PHARMACIA & UPJOHN CO.  
 PI Bienkowiaki MJ, Gurney M,  
 XX WPI, 2002-397167/43.  
 DR P-PSDB; ABB78608.  
 XX  
 XX  
 PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.  
 XX  
 PS Example 10; Page 139; 182pp; English.

CC The present invention describes a human aspartyl protease 1 (hu-Asp1)  
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,  
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1  
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a  
 CC nucleotide sequence that hybridises under stringent conditions to the non  
 CC -coding strand complementary to a defined 1804 nucleotide sequence (see  
 CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1  
 CC proteolytic activity and lacks nucleotides encoding a transmembrane  
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that  
 CC hybridises under stringent conditions to (III) (the nucleotide sequence  
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding  
 CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)  
 CC comprising (III) or (III') and (5) a host cell (V) transformed or  
 CC transfected with (III), (III') and/or (IV). The hu-Asp1 protease  
 CC substrate (I) may be used as an enzyme substrate in assays to detect  
 CC aspartyl protease activity, (II) and therefore diagnose diseases  
 CC associated with aberrant hu-Asp1 expression and activity such as  
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
 CC sequence encodes human Asp-2(b) deltaTM(His)6, which is given in an  
 CC example from the present invention

SQ Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL52488 ..

Alignment segment 1/1: (-)

Matching Percent	Quality:	Score:
11	32.00	264
81.82	11	11
81.82	54.55	54.55
0	54.55	54.55

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT  147

```

Sequence name: rngp2ndb:ADJ94364

Sequence documentation:

ID ADJ94364 standard; CDNA; 1305 BP.

AC ADJ94364;

DT 03-JUN-2004 (first entry)

DE Human-pro-Asp-2(b) deltaTM(His)6 CDNA.

KW Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;



KM nootropic; neuroprotective; amyloid beta; mutant.  
 XX  
 OS Homo sapiens.  
 XX Synthetic.  
 XX US6706485-B1.  
 XX 16-MAR-2004.  
 XX  
 PF 12-APR-2000; 2000US-00548376.  
 XX  
 PR 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99MO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 XX  
 PA (PHAA ) PHARMACIA & UPJOHN CO.  
 PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
 DR WPI; 2004-236722/22.  
 DR P-PSDB; ADJ94365.  
 XX  
 PT Identifying agents that modulate activity of Asp2 aspartyl protease  
 PT useful for treating or preventing Alzheimer's disease involves comparing  
 PT APP processing activity of protease in presence and absence of test  
 PT agent.  
 XX  
 PS Example 10; SEQ ID NO 52; 1099P; English.  
 XX  
 CC The invention relates to identifying agents that modulate activity of  
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 CC precursor protein (APP) in the presence and absence of a test agent,  
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated  
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy terminus amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NL, e.g. APP695-VF, all useful  
 CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the activity  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease. Preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease  
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a  
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2  
 CC proteins.  
 XX  
 SO Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ADJ94364 ..  
 Alignment segment 1/1: (-)  
 Matching length: 32.00 Total length: 264  
 Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55  
 Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
 Gaps: 0

Alignment:  
 27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
 179 AAGCTGCCCCCTCCGCGCGGCTCTCGGACTCT 147  
 Sequence name: rngp2nrb:AD050460  
 Sequence documentation:  
 ID AD050460 standard; DNA; 1305 BP.  
 XX  
 AC AD050460;  
 XX  
 DT 29-JUL-2004 (first entry)  
 XX  
 DE Human Asp2(b) deltatm(his)6 DNA.  
 XX  
 KM Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;  
 KM Alzheimer's disease; gene therapy; human; gene; de.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 FH Key  
 FT CDS  
 FT 1..1305  
 FT /\*tag= a  
 FT /product= "Human Asp-2(b) deltatm(his)6 protein"  
 FT /tranyl\_except= (pos:1385..1387, aa:His)  
 FT /tranyl\_except= (pos:1388..1390, aa:His)  
 FT /tranyl\_except= (pos:1391..1393, aa:His)  
 FT /tranyl\_except= (pos:1394..1396, aa:His)  
 FT /tranyl\_except= (pos:1397..1399, aa:His)  
 FT /tranyl\_except= (pos:1400..1402, aa:His)  
 XX  
 PN US6737510-B1.  
 PD 18-MAY-2004.  
 XX  
 PF 12-APR-2000; 2000US-00548373.  
 XX  
 PR 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99MO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 XX  
 PA (PHAA ) PHARMACIA & UPJOHN CO.  
 PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
 DR WPI; 2004-387112/36.  
 DR P-PSDB; AD050461.  
 XX  
 PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG  
 PT involved in processing amyloid precursor protein into amyloid beta,  
 PT useful in preparing a composition for treating or preventing Alzheimer's  
 PT disease.  
 XX  
 PS Example 10; SEQ ID NO 52; 1099P; English.  
 XX  
 CC The invention relates to a method for identifying an agent that decreases  
 CC the protease activity of the aspartyl protease (asp) polypeptide. It also  
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
 CC cleavage site of the amyloid precursor protein (APP). The invention is  
 CC useful in preparing a composition for treating or preventing Alzheimer's  
 CC disease. It is also useful in gene therapy. The present sequence is human  
 CC Asp2(b) deltatm(his)6 DNA. This sequence is used to illustrate the method  
 CC of the invention.  
 XX  
 SO Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x AD050460 ..

## Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

## Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147
```

Sequence name: rngp2ndb:ADR75373

## Sequence documentation:

ID ADR75373 standard; DNA; 1305 BP.

AC ADR75373:

DT 18-NOV-2004 (first entry)

DE Human Asp2(b) delcATM(His) 6 DNA.

KM Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;  
KW chromosome identification; Alzheimer's disease; human; gene; ds.OS Homo sapiens.  
OS Synthetic.

FH Key Location/Qualifiers

FT CDS 1..1305

FT /tag= a

FT /product= "Human Asp-2(b) delcATM(His) 6 protein"

FT /transl\_except= (pos:1285..1287, aa:His)

FT /transl\_except= (pos:1288..1290, aa:His)

FT /transl\_except= (pos:1291..1293, aa:His)

FT /transl\_except= (pos:1294..1296, aa:His)

FT /transl\_except= (pos:1297..1299, aa:His)

FT /transl\_except= (pos:1300..1302, aa:His)

PN US2004166507-A1.

PD 26-AUG-2004.

PF 29-AUG-2003; 2003US-00652045.

PR 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (GURN/) GURNEY M E.

XX (BIEN/) BIENKOWAKI M J.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Gurney ME, Bienkowaki MJ, Heinrichson RL, Parodi LA, Yan R;

XX MPI; 2004-624916/60.

XX P-PSDB; ADR75374.

XX

XX

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XX

XX

CC processing amyloid precursor protein (APP) into amyloid beta. The

CC invention also relates to a method for identifying an agent that

CC decreases the protease activity of the Asp. Asp DNA is useful in

CC chromosome identification as they can hybridise with a specific location

CC on a human chromosome and in identifying the relationship between genes

CC and diseases (particular gene responsible for causing diseases). It is

CC also useful for identifying candidates to modulate the progression of

CC Alzheimer's disease. Asp is useful in raising antibodies that are useful

CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The

CC present sequence is the human Asp2(b) delcATM(His) 6 DNA. This sequence is

CC used to illustrate the method of the invention.

XX

SQ Sequence 1305 BP; 277 A; 376 C; 390 G; 262 T; 0 U; 0 Other;

## Alignment of: us-10-726-967a-1 x ADR75373 ..

## Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

## Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147
```

Sequence name: rngp2ndb:AAA15668

## Sequence documentation:

ID AAA15668 standard; DNA; 1341 BP.

AC AAA15668;

DT 15-SEP-2003 (revised)

DT 06-AUG-2003 (revised)

DT 03-AUG-2000 (first entry)

XX

XX T7-caspase-human-pro-Asp-2(a)-delcATM nucleotide sequence.

XX

XX Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2; ss;

KW Alzheimer's disease; beta secretase site;

KW T7-caspase-human-pro-Asp-2(a)-delcATM.

XX

XX Homo sapiens.

OS Enterobacteria phage T7.

OS Chimeric.

XX WO200017369-A2.

XX

XX 30-MAR-2000.

XX

XX 23-SEP-1999; 99WO-US020881.

XX

XX 24-SEP-1998; 98US-0101594P.

XX

XX (PHAA ) PHARMACIA &amp; UPJOHN CO.

XX

XX Gurney ME, Bienkowi MJ, Heinrichson RL, Parodi LA, Yan R;

XX MPI; 2000-103209/26.

XX P-PSDB; AAY8431.

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

XX

This sequence represents a modified version of the human aspartase 2



[illegible]

Sequence name:	ringp2ndb:AAID13030
Sequence documentation:	
ID	AAID13030 standard; cDNA; 1341 BP.
AC	AAID13030;
XX	
DT	23-OCT-2001 (first entry)
XX	
DE	T7-Human-pro-Asp2(a) deltatM protein cDNA.
XX	
KM	Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;
KM	beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;
KM	neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;
KM	neuroprotective; enzyme therapy; gene therapy;
KM	pro-Asp2(a) deltatM protein; ss.
XX	
OS	Homo sapiens.
OS	Synthetic.
FT	
FT	Key
FT	Location/Qualifiers
FT	1..1341
FT	/*tag= a
FT	/product= "T7-Human-pro-Asp2(a) deltatM protein"
XX	
PN	W0200150829-A2.
XX	
PD	19-JUL-2001.
XX	
PF	09-MAY-2001; 2001WO-IB000799.
XX	
PR	09-MAY-2001; 2001WO-IB000799.
XX	
PA	(BIEN/) BIENKOWSKI M J.
PA	(GURN/) GURNEY M E.
PA	(HEIN/) HEINRIKSON R L.
PA	(PARO/) PARODI L A.
PA	(YANR/) YAN R.
XX	
P1	Bienskowski MJ, Gurney ME, Heinrikson RL, Parodi LA, Yan R;
XX	
DR	WPI; 2001-483072/52.
XX	
XX	P-PSDB; AAE06868.
PT	Novel purified polypeptide comprising fragment of mammalian aspartyl
PT	protease 2, lacking Asp2 transmembrane domain and retaining beta
PT	secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT	activity.
XX	
PS	Example 9; Fig 6; 185pp; English.
XX	
XX	The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
CC	precursor protein (APP) isoforms and their corresponding DNA molecules.
CC	Human aspartyl proteases can act as beta-secretase proteases useful for
CC	treating Alzheimer's disease. APP isoforms are useful for identifying
CC	modulators of amyloid-beta peptide production, for use in designing
CC	therapeutics for the treatment and prevention of Alzheimer's disease.
CC	dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
CC	and neuronal loss. APP isoforms are also used in methods for identifying
CC	inhibitors and modulators of human Asp2 activity. The invention relates
CC	to a method for identifying agents that modulate the activity of human
CC	aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
CC	as a means to screen in cellular assays for the inhibitors of beta- and
CC	gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
CC	polymerase chain reactions (PCR). The probes are useful for detecting Hu-
CC	Asp nucleic acids in <i>in vitro</i> assays and in Northern and Southern blots.
CC	The present cDNA sequence encodes T7-Human-pro-aspartyl protease 2a
CC	(Asp2a) deltatM protein which is obtained by the addition of T7 tag at
CC	the N-terminal end and deletion of transmembrane domain at the C-terminal
CC	end of Hu-Asp2a. Human Asp2a has beta-secretase activity
XX	
90	Sequence 1341 BP; 288 A; 386 C; 368 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13030 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
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158 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT

37  
126

Sequence name: rngp2ndb: AAD06748

Sequence documentation:

ID AAD06748 standard; CDNA: 1341 BP.

AC AAD06748;

DT 10-AUG-2001 (first entry)

DE T7-Human-pro-Asp-2(a) delta TM protein CDNA.

XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;

KW Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a;

KW beta-secretase; Asp-2a delta TM; ss.

XX Homo sapiens.

OS Synthetic.

XX Key

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

Location/Qualifiers  
/\*tag= a  
/product= "T7-Human-pro-Asp-2(a) delta TM protein"

MO200123533-A2.

05-APR-2001.

22-SEP-2000; 2000MO-US026080.

23-SEP-1999; 99US-0155493P.

23-SEP-1999; 99MO-US020881.

13-OCT-1999; 99US-00416901.

06-DEC-1999; 99US-0169232P.

(PHAA ) PHARMACIA & UPJOHN CO.

Gurney M, Bienkowski MJ;

WPI; 2001-290516/30.

P-PSDB; AAE02590.

Enzymes that cleave the alpha-secretase site of the amyloid precursor

protein, useful for the treatment of Alzheimer's disease.

Example 9; Fig 6; 189pp; English.

The present invention relates to enzymes for cleaving the alpha-

secretase site of the amyloid precursor protein (APP) and methods of

identifying those enzymes. The methods may be used to identify enzymes

that may be used to cleave the alpha-secretase cleavage site of the APP

protein. The enzymes may be used to treat or modulate the progress of

Location/Qualifiers  
/\*tag= a  
/product= "T7-Human-pro-Asp 2(a) delta TM fusion protein"

MO200149098-A2.

12-JUL-2001.

09-MAY-2001; 2001MO-IB000798.

09-MAY-2001; 2001MO-IB000798.

(BIEN/) BIENKOWSKI M J.

(GURN/) GURNEY M E.

(HEIN/) HEINRIKSON R L.

(PARO/) PARODI L A.

(YANR/) YAN R.

Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

WPI; 2001-502549/55.

P-PSDB; AAU06612.

Novel purified polypeptide comprising fragment of mammalian aspartyl

protease 2, lacking Asp2 transmembrane domain and retaining beta

secretase activity of Asp2 useful for identifying inhibitors of Asp2

activity.

Example 9; Fig 6; 189pp; English.

The invention relates to a purified polypeptide comprising a fragment of

mammalian aspartyl protease (Asp12) protein which lacks the Asp2

transmembrane domain and the Asp2 protein, and where the polypeptide and

the fragment retain the beta-secretase activity of the mammalian Asp2

protein. The invention also details polynucleotides for the Asp proteins

and vectors expressing them, and a polypeptide isoform of amyloid

protein precursor (APP) comprising the amino acid sequence of an APP or

Alignment of: us-10-726-967a-1 x AAD06748 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
:::|||||  
158 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT

37  
126

Sequence name: rngp2ndb: AAS11526

Sequence documentation:

ID AAS11526 standard; CDNA: 1341 BP.

AC AAS11526;

DT 24-OCT-2001 (first entry)

DE Human cDNA encoding the T7-Human-pro-Asp 2(a) delta TM fusion protein.

XX Human; Aspartyl protease; beta-secretase; neurotropic; Asp2;

KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

KW amyloid-beta; Abeta; T7-Human-pro-Asp 2(a) delta TM; ss.

XX Homo sapiens.

OS Synthetic.

XX Key

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

FT CDS

CC Its fragment containing an APP cleavage site recognizable by a mammalian  
CC beta-secretase, and further comprising two lysine residues at the  
CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP  
CC fragment. Also included in the invention are methods of identifying  
CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
CC useful for treating Alzheimer's disease. APP is useful in methods for  
CC identifying inhibitors or modulators of human Asp2 activity and amyloid-  
CC beta (A-beta) peptide production. APP is also useful in designing  
CC therapeutic for the treatment or prevention of Alzheimer's disease. APP  
CC comprising the APP-Sw-beta-secretase peptide sequence (NIDA), which is  
CC associated with increased levels of A-beta processing is useful in assays  
CC relating the Alzheimer's research. The expression vector is useful for  
CC recombinantly expressing APP. Nucleic acids that hybridize to Asp  
CC oligonucleotides are useful as probes or primers. The probes are useful  
CC for detecting hu-Asp nucleic acids in in vitro assays and in Northern and  
CC Southern blots. The present sequence encodes T7-human-pro- Asp 2(a) delta  
CC TM fusion protein which has a N-terminal T7 tag to aid purification when  
CC expressed in E. coli

XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11526 ..

Alignment segment 1/1: (-)

Matching Length:	Quality:	Score:
11	32.00	264
81.82	81.82	54.55
81.82	81.82	54.55

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::|
158 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT

```

37  
126

Sequence name: rmp2ndb:ABL52466

Sequence documentation:

ID ABL52466 standard; cDNA, 1341 BP.

XX ABL52466;

DT 16-UTL-2002 (first entry)

DE T7-human-pro-Asp-2(a)deltaTM nucleotide sequence SEQ ID NO:21.

XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;

KM amyloid precursor protein; APP; gene; ss.

XX Homo sapiens.

OS Key Location/Qualifiers

FT CDS 1..2094

FT /tag= a /product= "T7-human-pro-Asp-2(a)deltaTM"

PN GB2367060-A.

PD 27-MAR-2002.

PF 29-OCT-2001; 2001GB-00025934.

XX 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

PR 06-DEC-1999; 99US-0169232P.

PR 22-SEP-2000; 2000GB-00023315.

XX (PHAA ) PHARMACIA & UPJOHN CO.

PI Bienkowskij MJ, Gurney M;  
XX WPI, 2002-397167/43.  
DR P-PSDB; ABB78599.

PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
XX protease activity, e.g. for the diagnosis of Alzheimer's disease.

PS Example 9; Fig 6; 182pp; English.

XX The present invention describes a human aspartyl protease 1 (hu-Asp1)  
XX substrate (I) which comprises a peptide of no more than 50 amino acids,  
XX and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
XX Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
XX proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
XX (1) under acidic conditions; and (b) determining the level of hu-Asp1  
XX proteolytic activity; (2) a purified polynucleotide (III) comprising a  
XX nucleotide sequence that hybridizes under stringent conditions to the non  
XX -coding strand complementary to a defined 1804 nucleotide sequence (see  
XX ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1  
XX proteolytic activity and lacks nucleotides encoding a transmembrane  
XX domain; (3) a purified polynucleotide (III') comprising a sequence that  
XX hybridizes under stringent conditions to (III) (the nucleotide sequence  
XX encodes a polypeptide further lacking a pro-peptide domain corresponding  
XX to amino acids 23-62 of hu-Asp1 (see ABB78599)); (4) a vector (IV)  
XX comprising (III) or (III'); and (5) a host cell (V) transformed or  
XX transfected with (III), (III') and/or (IV). The hu-Asp1 protease  
XX substrate (I) may be used as an enzyme substrate in assays to detect  
XX aspartyl protease activity, (II) and therefore diagnose diseases  
XX associated with aberrant hu-Asp1 expression and activity such as  
XX Alzheimer's disease. Hu-Asp1 has been localized to chromosome 21, while  
XX hu-Asp2 has been localized to chromosome 11q23.3-24.1. The present  
XX sequence encodes human T7-human-pro-Asp-2(a)deltaTM, which is given in an  
XX example from the present invention

XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL52466 ..

Alignment segment 1/1: (-)

Matching Length:	Quality:	Score:
11	32.00	264
81.82	81.82	54.55
81.82	81.82	54.55

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyAla
:::|||||:::|:::|:::|
158 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT

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37  
126

Sequence name: rmp2ndb:ADJ94333

Sequence documentation:

ID ADJ94333 standard; cDNA, 1341 BP.

XX ADJ94333;

DT 03-JUN-2004 (first entry)

DE Human cDNA encoding T7-human-pro-Asp-2(a)deltaTM.

XX Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

XX neurotrophic; neuroprotective; amyloid beta; mutant.

XX Homo sapiens.

OS Synthetic.

XX US6706485-B1.





Sequence name: rngp2ndb:ADR75342

Sequence documentation:

ID ADR75342 standard; DNA; 1341 BP.

XX ADR75342;

XX 18-NOV-2004 (first entry)

XX T7-Human-pro-Asp-2(a)deltaTM DNA.

XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;  
XX chromosome identification; Alzheimer's disease; human; gene; de.

XX Homo sapiens.

XX Synthetic.

XX Key Location/Qualifiers

FT 1. 1341

FT /\*tag=

FT /product= "T7-Human-pro-Asp-2(a)deltaTM protein"

XX US2004166507-A1.

XX 26-AUG-2004.

XX 29-AUG-2003; 2003US-00652045.

XX 24-SEP-1998; 98US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 13-OCT-1999; 99US-00416901.

XX (GURNEY) GURNEY M E.

XX (BIEN) BIENKOWSKI M J.

XX (HEIN) HEINRIKSON R L.

XX (PARO) PARODI L A.

XX (YANR) YAN R.

XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2004-624916/60.

XX P-PSDB; ADR75343.

XX Novel purified/isolated polynucleotide encoding polypeptide having  
PT aspartyl protease activity involved in processing amyloid precursor  
PT protein into amyloid beta, useful in identifying agent decreasing  
PT activity of aspartyl protease.

XX Example 9; SEQ ID NO 21; 107pp; English.

XX The invention relates to nucleic acid sequences encoding aspartyl  
XX protease (Asp) polypeptides having aspartyl protease activity involved in  
XX processing amyloid precursor protein (APP) into amyloid beta. The  
XX invention also relates to a method for identifying an agent that  
XX decreases the protease activity of the Asp. Asp DNA is useful in  
XX chromosome identification as they can hybridise with a specific location  
XX on a human chromosome and in identifying the relationship between genes  
XX and diseases (particular gene responsible for causing diseases). It is  
XX also useful for identifying candidates to modulate the progression of  
XX Alzheimer's disease. Asp is useful in raising antibodies that are useful  
XX in diagnostic assay for detecting Hu-Asp polypeptide expression. The  
XX present sequence is the T7-Human-pro-Asp-2(a)deltaTM DNA. This sequence  
XX is used to illustrate the method of the invention.

XX Sequence 1341 BP; 288 A; 386 C; 388 G; 279 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADR75342 ..

Alignment segment 1/1: (-)

Quality: 32.00

Escore: 264

Matching length: 11 Total length: 11  
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|:::|:::  
158 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCT 126

Sequence name: rngp2ndb:AAA15688

Sequence documentation:

ID AAA15688 standard; cDNA; 1362 BP.

XX AAA15688;

XX 03-AUG-2000 (first entry)

XX Modified human aspartyl protease 2 (Asp2) nucleotide sequence.

XX Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;

XX Alzheimer's disease; beta secretase site; ss.

XX Homo sapiens.

XX WO200017369-A2.

XX 30-MAR-2000.

XX 23-SEP-1999; 99WO-US020881.

XX 24-SEP-1998; 98US-0101594P.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2000-303209/26.

XX P-PSDB; AAY8438.

XX New enzyme designated human aspartase useful in research into Alzheimer's  
PT disease is capable of cleaving amyloid protein precursor at the beta  
PT secretase site to produce amyloid beta peptide.

XX Example 10; Page 168-169; 183pp; English.

XX This sequence represents a modified human aspartyl protease 2 (Asp2)  
XX nucleotide sequence. Asp2 encoded by this sequence has the C-terminal  
XX transmembrane domain deleted. The invention relates to a protease (e.g.  
XX Asp2) capable of cleaving the beta secretase site of amyloid precursor  
XX protein (APP). The protease contains a sequence encoding the amino acid  
XX sequence DTG and a sequence encoding DSG or DTG separated by 100-300  
XX amino acids. When mutated the APP gene causes an autosomal dominant form  
XX of Alzheimer's disease. APP localises to the cell surface membrane and  
XX have a single C-terminal transmembrane domain. Proteolytic processing of  
XX APP produces the amyloid beta protein, which is possibly very important  
XX in Alzheimer's disease. The invention includes a nucleotide sequence  
XX encoding the protease, a vector containing the nucleotide sequence, and a  
XX cell line comprising the vector. Methods for screening for inhibitors of  
XX beta secretase activity are also given in the invention. The human  
XX aspartase protein and nucleotide sequences and the methods for  
XX identifying inhibitors of the protease, are useful in the treatment of  
XX and research in to Alzheimer's disease

XX Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAA15688 ..

Alignment segment 1/1: (-)

Quality: 32.00

Escore: 264





XX (PMAA ) PHARMACIA & UPJOHN CO.  
PA Bienkowskaki MJ, Gurney M;  
XX WPI; 2001-444208/48.  
XX P-PSDB; AAE10642.  
XX  
PT Polypeptide comprising fragments of human aspartyl protease with amyloid  
PT precursor protein processing activity and alpha-secretase activity, for  
PT identifying modulators useful in treating Alzheimer's disease.  
XX  
XX Example 10; Page 130; 187pp; English.  
XX  
CC The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1  
CC proteins which lack transmembrane domain or amino terminal domain or  
CC cytoplasmic domain and retains alpha-secretase activity and amyloid  
CC protein precursor (APP) processing activity. The proteins of the  
CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which  
CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase  
CC activity, where modulators that increase hu-Asp1 alpha-secretase activity  
CC are useful for treating Alzheimer's disease (AD) which causes progressive  
CC dementia with consequent formation of amyloid plaques, neurofibrillary  
CC tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful  
CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein  
CC with the substrate under acidic conditions and determining the level of  
CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding  
CC human Asp 2(a) protein lacking a transmembrane (TM) domain which is  
CC generated by the deletion of the C-terminal TM domain of human Asp 2(a)  
CC protein  
XX  
SQ Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x AAD17878 ..  
Alignment segment 1/1: (-)  
Matching Quality: 32.00 Total length: 264  
Percent Similarity: 81.82 Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
Gaps: 0  
Alignment:  
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::||||| 147  
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGCTCT 147  
Sequence name: rngp2ndb: AAD13034  
Sequence documentation:  
ID AAD13034 standard; cDNA; 1362 BP.  
XX  
AC AAD13034;  
XX  
XX 23-OCT-2001 (first entry)  
XX  
DE Human-Asp2(a) delatm protein cDNA.  
XX  
XX Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;  
XX beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;  
XX neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotropic;  
XX neuroprotective; antisense therapy; Asp2(a) delatm protein;  
XX gene therapy; ss.  
XX  
OS Homo sapiens.  
OS Synthetic.  
XX  
XX Key Location/Qualifiers  
XX CDS 1..1362  
XX FT /\*tag= a  
XX /product= "Human Asp2(a) delatm protein"

FT /cramel\_except= (pos:640..642, aa:Gln)  
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XX W0200150829-A2.  
XX  
XX 19-JUL-2001.  
XX  
XX 09-MAY-2001; 2001MO-IB000799.  
XX  
XX 09-MAY-2001; 2001MO-IB000799.  
XX  
XX  
XX (BIEN/) BIENKOWSKI M J.  
XX (GURN/) GURNEY M E.  
XX (HEIN/) HEINRIKSON R L.  
XX (PARO/) PARODI L A.  
XX (YANR/) YAN R.  
XX  
XX Bienkowskaki MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
XX WPI; 2001-483072/52.  
XX P-PSDB; AAE06872.  
XX  
XX Novel purified polypeptide comprising fragment of mammalian aspartyl  
XX protease 2, lacking Asp2 transmembrane domain and retaining beta  
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2  
XX activity.  
XX  
XX Example 10; Page 160; 185pp; English.  
XX  
XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid  
XX precursor protein (APP) isoforms and their corresponding DNA molecules.  
XX Human aspartyl proteases can act as beta-secretase proteases useful for  
XX treating Alzheimer's disease. APP isoforms are useful for identifying  
XX modulators of amyloid-beta peptide production, for use in designing  
XX therapeutics for the treatment and prevention of Alzheimer's disease,  
XX dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis  
XX and neuronal loss. APP isoforms are also used in methods for identifying  
XX inhibitors and modulators of human Asp2 activity. The invention relates  
XX to a method for identifying agents that modulate the activity of human  
XX aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
XX as a means to screen in cellular assays for the inhibitors of beta- and  
XX gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in  
XX polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
XX Asp nucleic acids in in vitro assays and in Northern and Southern blots.  
XX The present cDNA sequence encodes Human aspartyl protease 2a (Hu-Asp2a)  
XX delatm protein which is obtained by the deletion of transmembrane domain  
XX at the C-terminal end of Hu-Asp2a. Human Asp2a has beta-secretase  
XX activity  
XX  
SQ Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x AAD13034 ..  
Alignment segment 1/1: (-)  
Matching Quality: 32.00 Total length: 264  
Percent Similarity: 81.82 Matching Percent Identity: 54.55  
Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
Gaps: 0  
Alignment:  
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::||||| 147  
179 AAGCTGCCCCCTCCGGCCGGGCTCTCGGCTCT 147  
Sequence name: rngp2ndb: AAD06752  
Sequence documentation:  
ID AAD06752 standard; cDNA; 1362 BP.  
XX  
XX AAD06752;  
XX

```

DT      10-AUG-2001    (first entry)
XX      Human-Asp-2(a) delta TM protein cDNA.
DE
XX
XX      Human; alpha-secretase; amyloid precursor protein; APP; therapy;
KW      Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a;
KV      beta-secretase; Asp-2a delta TM; mutant; ss.
XX
OS      Homo sapiens.
OS      Synthetic.
FH
FT      Key          Location/Qualifiers
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              /*tag=
              /product= "Human-Asp-2(a) delta TM protein"
              /transl_except= (pos:640..642, aa:Gln)
PN MO200123533-A2.
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PD      05-APR-2001.
XX
PP      22-SEP-2000; 2000MO-USO26080.
PR      23-SEP-1999;   99US-0155493P.
PR      23-SEP-1999;   99MO-USO20881.
PR      13-OCT-1999;   99US-0041650I.
PR      06-DEC-1999;   99US-0169232P.
PA      (PHAA ) PHARMACIA & UPJOHN CO.
PI      Gurney M, Bienkowski MJ;
XX      WPI; 2001-290516/30.
DR      P-PSDB; AAE02594.
XX
PT      Enzymes that cleave the alpha-secretase site of the amyloid precursor
PT      protein, useful for the treatment of Alzheimer's disease.
XX
PS      Example 10; Page 158-159; 189pp; English.
CC
CC      The present invention relates to enzymes for cleaving the alpha-
CC      secretase site of the amyloid precursor protein (APP) and methods of
CC      identifying those enzymes. The methods may be used to identify enzymes
CC      that may be used to cleave the alpha-secretase cleavage site of the A
CC      protein. The enzymes may be used to treat or modulate the progress of
CC      Alzheimer's disease. The present sequence is a cDNA encoding human
CC      Aspartyl protease 2a (Asp-2a) deltaTM protein which is obtained by
CC      deleting its transmembrane domain. This sequence has beta-secretase
CC      processing activity
XX
SQ      Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;
Alignment of: us-10-726--967a-1 x AAD06752 ..
Alignment segment 1/1: (-)
Matching Percent Quality: 32.00 Total length: 264
Total Percent Similarity: 81.82 Matching Percent Identity: 11
Total Percent Identity: 54.55
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Alignment:
27 ArgLeuProleuArgSerGlyLeuGlYcLYala 37
:::|||||::|||::|::|::|::|::|::|::|:
179 AGCGTGCCTCCGCCGGCCGTCTCGAGCTCT 147
Sequence name: rmgp2ndb::AAS11530
Sequence documentation:
ID AAS11530 standard; cdNA; 1362 BP.
XX
```

AC	AA511530;
XX	
DT	24-OCT-2001 (first entry)
XX	
DE	Human cDNA encoding Human-pro-Asp 2(a) delta TM.
XX	
KW	Human; Aspartyl protease; beta-secretase; neurotrophic; ASP2;
KW	neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
KW	amyloid-beta; Abeta; Human-pro-Asp 2(a) delta TM; 66; mutant.
XX	
OS	Homo sapiens.
OS	Synthetic.
XX	
FT	Key
FT	Location/Qualifiers
FT	1..1362
FT	/*tag= a
FT	/product= "Human-Pro-Asp 2(a) delta TM"
FT	/transl_except= (pos:639..642,aa:Gln)
FT	1..63
FT	/*tag= b
FT	64..1359
FT	/*tag= c
FT	/label= Mature_Human_pro_Asp_2(a)_delta_TM
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PN	WO200149098-A2.
XX	
PD	12-JUL-2001.
XX	
PF	09-MAY-2001; 2001WO-1B000798.
XX	
PR	09-MAY-2001; 2001WO-1B000798.
XX	
PA	(BIEN)/ BIENKOWSKI M J.
PA	(GURN)/ GURNEY M E.
PA	(HEIN)/ HEINRIKSON R L.
PA	(PARO)/ PARODI L A.
PA	(YANR)/ YAN R.
XX	
PI	Biенокowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX	
XX	WPI: 2001-502549/55.
XX	P-PSDB; AAU06616.
DR	
PT	Novel purified polypeptide comprising fragment of mammalian aspartyl
PT	protease 2, lacking Asp2 transmembrane domain and retaining beta
PT	secretase activity of Asp2 useful for identifying inhibitors of Asp2
PT	activity.
XX	
PS	Example 10; Page 160; 185pp; English.
XX	
XX	The invention relates to a purified polypeptide comprising a fragment of
CC	mammalian aspartyl protease (Asp) 2 protein which lacks the Asp2
CC	transmembrane domain and the Asp2 protein, and where the polypeptide and
CC	the fragment retain the beta-secretase activity of the mammalian Asp2
CC	protein. The invention also details polynucleotides for the Asp proteins
CC	and vectors expressing them, and a polypeptide (isoform of amyloid
CC	protein precursor (APP) comprising the amino acid sequence of an APP or
CC	its fragment containing an APP cleavage site recognizable by a mammalian
CC	beta-secretase, and further comprising two lysine residues at the
CC	carboxyl terminus of the amino acid sequence of the mammalian APP or APP
CC	fragment. Also included in the invention are methods of identifying or
CC	modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
CC	useful for treating Alzheimer's disease. APP is useful in methods for
CC	identifying inhibitors or modulators of human Asp2 activity and amyloid-
CC	beta (Abeta) peptide production. APP is also useful in designing
CC	therapeutics for the treatment or prevention of Alzheimer's disease. APP
CC	comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is
CC	associated with increased levels of Abeta processing is useful in assays
CC	relating the Alzheimer's research. The expression vector is useful for
CC	recombinantly expressing APP. Nucleic acids that hybridise to Asp
CC	oligonucleotides are useful as probes or primers. The probes are useful
CC	for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and
CC	Southern blots. The present sequence encodes Human-pro- Asp 2(a) delta TM



XX Identifying agents that modulate activity of Asp2 aspartyl protease  
 PT useful for treating or preventing Alzheimer's disease involves comparing  
 PT APP processing activity of protease in presence and absence of test  
 PT agent.

XX Example 10; SEQ ID NO 29; 109pp; English.

XX The invention relates to identifying agents that modulate activity of  
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 CC precursor protein (APP) in the presence and absence of a test agent,  
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated  
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy terminal amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NT, designated e.g. APP695-Sw  
 CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the activity  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease. Preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease  
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a  
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2  
 CC proteins.

XX Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94341 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	264
Matching length:	11		11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
Gaps:	0			

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGCGCGGCTCTCTCGGCTCT 147

```

Sequence name: trnp2ndb:AD050437

Sequence documentation:

ID AD050437 standard; DNA; 1362 BP.

XX AC AD050437;

XX DT 29-JUL-2004 (first entry)

XX DE Human Asp-2(a)deltaTM mutant DNA.

XX KW Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;

XX KW Alzheimer's disease; gene therapy; human; gene; mutant; de.

XX OS Homo sapiens.

XX OS Synthetic.

FH Key Location/Qualifiers

FT CDS 1..1362

FT /tag= a

FT /product= "Human Asp-2(a)deltaTM mutant protein"

XX US6737510-B1.

XX 18-MAY-2004.

XX 12-APR-2000; 2000US-00548373.

XX 24-SEP-1998; 98US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WC-US020881.

XX 13-OCT-1999; 99US-00416901.

XX (PHAA ) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2004-387112/36.

XX DR P-PSDB; AD050438.

XX PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG

XX PT involved in processing amyloid precursor protein into amyloid beta,

XX PT useful in preparing a composition for treating or preventing Alzheimer's

XX PT disease.

XX Example 10; SEQ ID NO 29; 108pp; English.

XX The invention relates to a method for identifying an agent that decreases  
 CC the protease activity of the aspartyl protease (Asp) polypeptide. It also  
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
 CC cleavage site of the amyloid precursor protein (APP). The invention is  
 CC useful in preparing a composition for treating or preventing Alzheimer's  
 CC disease. It is also useful in gene therapy. The present sequence is human  
 CC Asp-2(a)deltaTM mutant DNA. This sequence is used to illustrate the  
 CC method of the invention.

XX Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050437 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	264
Matching length:	11		11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
Gaps:	0			

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGCGCGGCTCTCTCGGCTCT 147

```

Sequence name: trnp2ndb:ADR75350

Sequence documentation:

ID ADR75350 standard; DNA; 1362 BP.

XX AC ADR75350;

XX DT 18-NOV-2004 (first entry)

XX DE Human Asp-2(a)deltaTM mutant DNA.

XX KW Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;

XX KW chromosome identification; Alzheimer's disease; human; mutant; gene; ds.

XX OS Homo sapiens.

XX OS Synthetic.

OS Synthetic.  
XX  
FH Key Location/Qualifiers  
FT CDS 1..1362  
FT /tag= a  
FT /product= "Human Asp-2(a)deltaTM mutant protein"  
FT /transl\_except= (pos:640..642, aa:Gln)  
XX  
PN US2004166507-A1.  
XX  
PD 26-AUG-2004.  
XX  
PF 29-AUG-2003; 2003US-00652045.  
XX  
PR 24-SEP-1998; 98US-0101594P.  
PR 23-SEP-1999; 99US-00404133.  
PR 23-SEP-1999; 99US-0155493P.  
PR 13-OCT-1999; 99US-00416901.  
XX  
PA (GURN/) GURNEY M E.  
PA (BIEN/) BIENKOWAKI M J.  
PA (HEIN/) HEINRIKSON R L.  
PA (PARO/) PARODI L A.  
PA (YANR/) YAN R.  
XX  
PI Gurney ME, Bienkowiaki MJ, Heinrichson RL, Parodi LA, Yan R;  
XX  
PI MPI, 2004-624916/60.  
XX  
DR P-PSDB; ADR75351.  
XX  
XX  
PT Novel purified/isolated polynucleotide encoding polypeptide having  
PT aspartyl protease activity involved in processing amyloid precursor  
PT protein into amyloid beta, useful in identifying agent decreasing  
PT activity of aspartyl protease.  
XX  
XX  
PS Example 10; SEQ ID NO 29; 107pp; English.  
XX  
XX  
CC The invention relates to nucleic acid sequences encoding aspartyl  
CC protease (Asp) polypeptides having aspartyl protease activity involved in  
CC processing amyloid precursor protein (APP) into amyloid beta. The  
CC invention also relates to a method for identifying an agent that  
CC decreases the protease activity of the Asp. Asp DNA is useful in  
CC chromosome identification as they can hybridize with a specific location  
CC on a human chromosome and in identifying the relationship between genes  
CC and diseases (particular gene responsible for causing diseases). It is  
CC also useful for identifying candidates to modulate the progression of  
CC Alzheimer's disease. Asp is useful in raising antibodies that are useful  
CC in diagnostic assay for detecting Hu-Asp polypeptide expression. The  
CC present sequence is the human Asp-2(a)deltaTM mutant DNA. This sequence  
CC is used to illustrate the method of the invention.  
XX  
SQ Sequence 1362 BP; 284 A; 400 C; 396 G; 282 T; 0 U; 0 Other;  
XX  
Alignment of: us-10-726-967a-1 x ADR75350 ..  
XX  
Alignment segment 1/1: (-)  
XX  
Matching Quality: 32.00  
Matching length: 11  
Total length: 264  
Matching Percent Similarity: 81.82  
Total Percent Identity: 54.55  
Total Percent Similarity: 81.82  
Total Percent Identity: 54.55  
Gaps: 0  
XX  
Alignment:  
XX  
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|||||:::|||||:::  
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT 147  
XX  
Sequence name: rngp2ndb:ADJ57772  
XX  
Sequence documentation:  
ID ADJ57772 standard; DNA; 1368 BP.

XX  
AC ADJ57772;  
XX  
DT 06-MAY-2004 (first entry)  
XX  
XX DNA sequence for BACE WT.  
XX  
XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;  
XX Alzheimer's disease; ds.  
XX  
OS Synthetic.  
XX  
FH Key Location/Qualifiers  
FT CDS 1..1368  
FT /tag= a  
FT /product= "BACE protein"  
XX  
PN WQ2004011641-A2.  
XX  
PD 05-FEB-2004.  
XX  
XX  
XX 25-JUL-2003; 2003WO-GB003200.  
XX  
XX 26-JUL-2002; 2002US-0398681P.  
XX  
XX (ASTE-) ASTEX TECHNOLOGY LTD.  
XX  
XX  
XX Vuillard LMM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;  
XX  
XX MPI, 2004-169242/16.  
XX  
XX P-PSDB; ADJ57773.  
XX  
XX  
XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
XX preventing Alzheimer's disease or Alzheimer's-type pathology of Down's  
XX syndrome.  
XX  
XX  
PS Disclosure; SEQ ID NO 1; 145pp; English.  
XX  
XX  
XX The present invention relates to a beta site APP cleaving enzyme (BACE)  
XX protein. The compound or the composition is useful in medicine and the  
XX BACE crystal structure is useful for drug discovery. The BACE protein,  
XX compounds, pharmaceutical compositions, medicament, drug or other  
XX composition comprising the compound is useful for treating or preventing  
XX Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The  
XX present sequence represents the DNA sequence for a BACE encoding  
XX sequence.  
XX  
SQ Sequence 1368 BP; 292 A; 393 C; 400 G; 283 T; 0 U; 0 Other;  
XX  
Alignment of: us-10-726-967a-1 x ADJ57772 ..  
XX  
Alignment segment 1/1: (-)  
XX  
Matching Quality: 32.00  
Matching length: 11  
Total length: 264  
Matching Percent Similarity: 81.82  
Total Percent Identity: 54.55  
Total Percent Similarity: 81.82  
Total Percent Identity: 54.55  
Gaps: 0  
XX  
Alignment:  
XX  
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
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185 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT 153  
XX  
Sequence name: rngp2ndb:ACC84850  
XX  
Sequence documentation:  
ID ACC84850 standard; DNA; 1371 BP.  
XX  
XX ACC84850;  
XX  
XX 12-SEP-2003 (first entry)  
XX  
DT



DT 15-SEP-2003 (revised)  
 DT 06-AUG-2003 (revised)  
 DT 03-AUG-2000 (first entry)  
 XX  
 XX  
 DE T7-caspase-human-pro-Asp-2(a)-deltaTM nucleotide sequence.  
 XX  
 KM Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2; ss;  
 KM Alzheimer's disease; beta secretase site;  
 KM T7-caspase-human-pro-Asp-2(a)-deltaTM.  
 XX  
 OS Homo sapiens.  
 OS Enterobacteria phage T7.  
 OS Chimeric.  
 XX  
 XX WO200017369-A2.  
 XX  
 PD 30-MAR-2000.  
 XX  
 XX 23-SEP-1999; 99WO-US020881.  
 XX  
 XX 24-SEP-1998; 98US-0101594P.  
 XX  
 XX (PHAA ) PHARMACIA & UPJOHN CO.  
 XX  
 XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
 PI P-PSDB; AA98432.  
 DR  
 XX  
 XX  
 PT New enzyme designated human aspartase useful in research into Alzheimer's  
 PT Disease is capable of cleaving amyloid protein precursor at the beta  
 PT secretase site to produce amyloid beta peptide.  
 XX  
 XX  
 PS Example 9; Fig 7; 183pp; English.  
 XX  
 CC This sequence represents a modified version of the human aspartase 2  
 CC (Asp2) nucleotide sequence. The sequence is used in the bacterial  
 CC expression of human Asp2L. The invention relates to a protease (e.g.  
 CC Asp2) capable of cleaving the beta secretase site of amyloid precursor  
 CC protein (APP). The protease contains a sequence encoding the amino acid  
 CC sequence DTG and a sequence encoding DSG or DTG separated by 100-300  
 CC amino acids. When mutated the APP gene causes an autosomal dominant form  
 CC of Alzheimer's disease. APP localises to the cell surface membrane and  
 CC have a single C-terminal transmembrane domain. Proteolytic processing of  
 CC APP produces the amyloid beta protein, which is possibly very important  
 CC in Alzheimer's disease. The invention includes a nucleotide sequence  
 CC encoding the protease, a vector containing the nucleotide sequence, and a  
 CC cell line comprising the vector. Methods for screening for inhibitors of  
 CC beta secretase activity are also given in the invention. The human  
 CC aspartase protein and nucleotide sequences and the methods for  
 CC identifying inhibitors of the protease, are useful in the treatment of  
 CC and research in to Alzheimer's disease. (Updated on 06-AUG-2003 to  
 CC correct OS field.) (Updated on 15-SEP-2003 to standardise OS field)  
 CC  
 XX  
 SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x AAA15669 ..  
 Alignment segment 1/1: (-)  
 Matching length: 32.00  
 Matching Percent Similarity: 81.82  
 Total Percent Similarity: 81.82  
 Gaps: 0  
 Total Percent Identity: 54.55  
 Alignment:  
 27 ArgLeuProLeuArgserGlyLeuGlyGlyAla 37  
 ::::::::::::::::::::: 165  
 197 AAGCTGCCCCCTCGGCGGCGCTCTCGGCGCTCT  
 Sequence name: rngp2ndb:AA511712

Sequence documentation:  
 ID AA511712 standard; DNA; 1380 BP.  
 XX  
 AC AA511712;  
 XX  
 DT 11-SEP-2003 (revised)  
 DT 24-OCT-2001 (first entry)  
 XX  
 XX  
 DE DNA encoding T7-caspase-human aspartyl protease 2a deltaTM.  
 XX  
 KM Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;  
 KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;  
 KM beta-secretase; Alzheimer's disease; ds; T7-caspase-HuAsp-2adeltaTM.  
 XX  
 OS Homo sapiens.  
 OS Enterobacteria phage T7.  
 XX  
 XX  
 FH Key Location/Qualifiers  
 FT CDS 1..1380  
 FT /tag= a  
 FT /product= "T7-caspase-Aspartyl protease-2a delta TM"  
 FT sig\_peptide 1..81  
 FT /tag= b  
 FT mat\_peptide 82..1377  
 FT /tag= c  
 FT /note= "Mature T7-caspase-aspartyl protease-2a delta TM"  
 XX  
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 PN WO200149097-A2.  
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 PD 12-JUL-2001.  
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 PF 09-MAY-2001; 2001WO-IB000797.  
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 PR 09-MAY-2001; 2001WO-IB000797.  
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 PA (BIEN/) BIENKOWSKI M J.  
 PA (GURN/) GURNEY M E.  
 PA (HEIN/) HEINRICHSON R L.  
 PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.  
 XX  
 XX  
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 XX  
 XX WPI; 2001-502548/55.  
 DR P-PSDB; AA007212.  
 DR  
 XX  
 XX  
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.  
 XX  
 XX  
 PS Example 9; Fig 7; 185pp; English.  
 XX  
 CC The invention relates to a novel purified polypeptide comprising a  
 CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. Also included is an isoform of amyloid protein precursor (APP)  
 CC comprising the amino acid sequence of a APP or its fragment containing an  
 CC APP cleavage site recognizable by a mammalian beta-secretase, and further  
 CC comprising two lysine residues at the carboxyl terminus of the amino acid  
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used  
 CC for assaying for modulators of beta-secretase activity; identifying  
 CC agents that inhibit the APP processing activity of human Asp2 aspartyl  
 CC protease (Hu-Asp2); identifying agents that modulate the activity of Asp2  
 CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.  
 CC Agents identified by the above methods are useful for treating  
 CC Alzheimer's disease; and for identifying modulators of amyloid-beta  
 CC (Abeta) peptide production, for use in designing therapeutics for the  
 CC treatment or prevention of Alzheimer's disease. Probes and primers  
 CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp  
 CC nucleic acids in in vitro assays and in Northern and Southern blots. The





```

OS      Synthetic.
XX
XX      Key
XX      Location/Qualifiers
FH      CDS
FT      1..1380
FT      /*tag= a
FT      /product= "Human-Asp 2(a) lacking transmembrane domain
FT      (His)6 protein"
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FT      /transl_except= (pos:1360..1362, aa:His)
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FT      /transl_except= (pos:1366..1368, aa:His)
FT      /transl_except= (pos:1369..1371, aa:His)
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FT      /transl_except= (pos:1375..1377, aa:His)
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XX      GB2357767-A.
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XX      PD
XX      04-JUL-2001.
XX
XX      PF
XX      22-SEP-2000; 2000GB-00023315.
XX
XX      PR
XX      23-SEP-1999; 99US-00404133.
XX      23-SEP-1999; 99US-0155493P.
XX      23-SEP-1999; 99WO-US020881.
XX      13-OCT-1999; 99US-00416901.
XX      06-DEC-1999; 99US-0169232P.
XX
XX      PA      (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX      BI      Bienkowska MJ, Gurney M;
XX      WI; 2001-444208/48.
XX      P-PSDB; AAE10643.
XX
XX      PT      Polypeptide comprising fragments of human aspartyl protease with amyloid
XX      precursor protein processing activity and alpha-secretase activity, for
XX      identifying modulators useful in treating Alzheimer's disease.
XX
XX      Example 10; Page 132; 187pp; English.
XX
XX      The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX      proteins which lack transmembrane domain or amino terminal domain or
XX      cytoplasmic domain and retains alpha-secretase activity and amyloid
XX      protein precursor (APP) processing activity. The proteins of the
XX      invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX      in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX      activity, where modulators that increase hu-Asp1 alpha-secretase activity
XX      are useful for treating Alzheimer's disease (AD) which causes progressive
XX      dementia with consequent formation of amyloid plaques, neurofibrillary
XX      tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX      for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
XX      with the substrate under acidic conditions and determining the level of
XX      hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
XX      human Asp 2(a) lacking a transmembrane (TM) domain (his)6 protein which
XX      is generated from human Asp 2(a) protein by the deletion of its C-
XX      terminal TM domain and addition of hexa-histidine tag at its C-terminus
XX
XX      Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;
XX
XX      Alignment of: us-10-726-967a-1 x AADI7879 ..
XX
XX      Alignment segment 1/1: (-)
XX
XX      Quality: 32.00      Escore: 264
XX      Matching length: 11      Total length: 11
XX      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
XX      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
XX
XX      Gaps: 0
XX
XX      Alignment:
XX
XX      27 ArgLeuProLeuArgSerGlyLeucylGLYALA      37
XX      ::::::::::::::::::::
XX      ::::::::::::::::::::

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Sequence name: rnsnp2ndb:AAD17875

Sequence documentation:  
ID AAD17875 standard; cDNA, 1380 BP.  
XX  
XX AAD17875;  
XX  
XX 10-DEC-2001 (first entry)  
DE T7-Caspase-human-pro-Asp 2(a) protein lacking TM domain encoding cDNA.  
XX  
XX Human; aspartyl protease 1; Asp1; amyloid precursor protein; App;  
KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;  
KM amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;  
T7-Caspase-human-pro-Asp 2(a) protein; ss.  
XX  
OS Homo sapiens.  
OS Synthetic.

	Key	Location/Qualifiers
FT	CDS	1..1380
FT		/*tag= a
FT		/product= "T7-Caspase-human-pro-Asp 2(a) protein lacking transmembrane domain"
PN	GB2357767-A.	
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XX	04-JUL-2001.	
XX		
PF	22-SEP-2000; 2000GB-00023315.	
PR	23-SEP-1999; 99US-00404433.	
PR	23-SEP-1999; 99US-0155483P.	
PR	23-SEP-1999; 99WC-US020881.	
PR	13-OCT-1999; 99US-00416901.	
PR	06-DEC-1999; 99US-0169232P.	
PA	(PHNA ) PHARMACIA & UPJOHN CO.	
PI	Bienkowska MJ, Gurney M,	
DR	WPI; 2001-444208/48.	
P	P-PSD; NAEI0639.	
PT	Polypeptide comprising fragments of human aspartyl protease with amyloid precursor protein processing activity and alpha-secretase activity, for identifying modulators useful in treating Alzheimer's disease.	
XX		
PS	Example 9; Fig 7; 187p; English.	
XX		
CC	The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1 proteins which lack transmembrane domain or amino terminal domain or cytoplasmic domain and retains alpha-secretase activity and amyloid protein precursor (App) processing activity. The proteins of the invention are useful for assaying hu-Asp1 alpha-secretase activity, which in turn is useful for identifying modulators of hu-Asp1 alpha-secretase activity, where modulators that increase hu-Asp1 alpha-secretase activity are useful for treating Alzheimer's disease (AD) which causes progressive dementia with consequent formation of amyloid plaques, neurofibrillary tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein with the substrate under acidic conditions and determining the level of hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding human T7-Caspase-human-pro-Asp 2(a) protein lacking a transmembrane (TM) domain. T7-Caspase-human-pro-Asp 2(a) protein is generated from human Asp 2(a) protein by the addition of a T7 tag and caspase 8 leader sequence at its N-terminal end and the deletion of its C-terminal TM domain	
SQ	Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;	
Alignment of:	us-10-726-967a-1 x AAD17875 ..	

## Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

## Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||::|::|::|::|::|::|::|::|::|
197 AAGCTGCCCTCCGCGCGGCTCTCTCGGCTCTC
```

Sequence name: rngp2ndb:AAD13035

Sequence documentation:

ID AAD13035 standard; cDNA; 1380 BP.

AC AAD13035;

DT 23-OCT-2001 (first entry)

DE Human-Asp2(a) deltatm (His)6 protein cDNA.

Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP; beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis; neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic; neuroprotective; antisense therapy; Asp2(a) deltatm (His)6 protein; gene therapy; ss.

OS Homo sapiens.  
OS Synthetic.

Location/Qualifiers  
1. 1380

FT CDS /\*tag= a /product= "Human Asp2(a) deltatm (His)6 protein"

FT FT /transl\_except= (pos:640..642, aa:Gln)

FT FT /transl\_except= (pos:1360..1362, aa:His)

FT FT /transl\_except= (pos:1363..1365, aa:His)

FT FT /transl\_except= (pos:1366..1368, aa:His)

FT FT /transl\_except= (pos:1369..1371, aa:His)

FT FT /transl\_except= (pos:1372..1374, aa:His)

FT FT /transl\_except= (pos:1375..1377, aa:His)

FT misc\_feature

FT /\*tag= d

FT /note= "Encodes N-terminal 1-21 amino acids of human

FT Asp2(a) deltatm (His)6 protein"

FT sig\_peptide

FT /\*tag= b

FT mat\_peptide

FT /\*tag= c

FT /product= "Mature human Asp2(a) deltatm (His)6 protein"

XX WO200150829-A2.

XX 19-JUL-2001.

XX 09-MAY-2001; 2001WO-IB000799.

XX 09-MAY-2001; 2001WO-IB000799.

XX (BIEN/) BIENKOWSKI M J.

XX (GURN/) GURNEY M E.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-463072/52.

DR P-PSDB; AAE06873.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl

PT protease 2, lacking Asp2 transmembrane domain and retaining beta

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

PT activity.

XX Example 10; Page 162; 185pp; English.

CC The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid  
CC precursor protein (APP) isoforms and their corresponding DNA molecules.  
CC Human aspartyl proteases can act as beta-secretase proteases useful for  
CC treating Alzheimer's disease. APP isoforms are useful for identifying  
CC modulators of amyloid-beta peptide production, for use in designing  
CC therapeutics for the treatment and prevention of Alzheimer's disease,  
CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis  
CC and neuronal loss. APP isoforms are also used in methods for identifying  
CC inhibitors and modulators of human Asp2 activity. The invention relates  
CC to a method for identifying agents that modulate the activity of human  
CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
CC as a means to screen in cellular assays for the inhibitors of beta- and  
CC gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in  
CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.  
CC The present cDNA sequence encodes human aspartyl protease 2a (Hu-Asp2a)  
CC deltatm (His)6 protein which is obtained by the deletion of C-terminal  
CC transmembrane domain and addition of a hexa-histidine tag at the C-  
CC terminal end of Hu-Asp2a. Human Asp2a has beta-secretase activity

SQ Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13035 ..

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

## Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCGCGGCTCTCTCGGCTCTC
```

Sequence name: rngp2ndb:AAD13031

Sequence documentation:

ID AAD13031 standard; cDNA; 1380 BP.

AC AAD13031;

DT 23-OCT-2001 (first entry)

DE T7-Caspase-Human-pro-Asp2(a) deltatm protein cDNA.

Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP; beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis; neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic; neuroprotective; antisense therapy; caspase-pro-Asp2(a) deltatm protein; gene therapy; ss.

OS Homo sapiens.  
OS Synthetic.

XX Key

XX CDS

XX Location/Qualifiers

FT /\*tag= a /product= "T7-Caspase-Human-pro-Asp2(a) deltatm protein"

XX WO200150829-A2.

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XX 19-JUL-2001.
PD
XX
XX 09-MAY-2001; 2001MO-IB000799.
PF
XX
XX 09-MAY-2001; 2001MO-IB000799.
PR
XX
XX (BIEN/) BIENKOWSKI M J.
PA (GURN/) GURNEY M E.
PA (HEIN/) HEINRIKSON R L.
PA (PARO/) PARODI L A.
PA (YANR/) YAN R.
PI
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-483072/52.
XX P-PSDB; AAE06869.
XX
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 9; Fig 7; 185pp; English.
XX
XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX precursor protein (APP) isoforms and their corresponding DNA molecules.
XX Human aspartyl proteases can act as beta-secretase proteases useful for
XX treating Alzheimer's disease. APP isoforms are useful for identifying
XX modulators of amyloid-beta peptide production, for use in designing
XX therapeutics for the treatment and prevention of Alzheimer's disease,
XX dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX and neuronal loss. APP isoforms are also used in methods for identifying
XX inhibitors and modulators of human Asp2 activity. The invention relates
XX to a method for identifying agents that modulate the activity of human
XX aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX as a means to screen in cellular assays for the inhibitors of beta- and
XX gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX APP nucleic acids in in vitro assays and in Northern and Southern blots.
XX The present cDNA sequence encodes T7-Caspase-Human-pro-aspartyl protease
XX 2a (Asp2a) delatm protein which is obtained by the addition of T7 tag
XX and caspase 8 leader sequence at the N-terminal end and deletion of
XX transmembrane domain at the C-terminal end of Hu-Asp2a. Human Asp2a has
XX beta-secretase activity
XX
XX SO Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD13031 ..
XX
XX Alignment segment 1/1: (-)
XX
XX      Quality:      32.00      EScore:      264
XX      Matching length:      11      Total length:      11
XX      Matching Percent Similarity:      81.82      Matching Percent Identity:      54.55
XX      Total Percent Similarity:      81.82      Total Percent Identity:      54.55
XX      Gaps:      0
XX
XX Alignment:
XX
XX      27 ArgLeuProLeuArgSerGIyleuGIyGIyAla      37
XX      ::::|||||:|||||:|||||:|||||:|||||:      165
XX      197 AAGCTGCCCCCTCCGGCCGGGCTCTCTCGGGCTCT
XX
XX Sequence name: trnp2ndb:AA06749
XX
XX Sequence documentation:
XX ID AAD06749 standard; cDNA; 1380 BP.
XX
XX AC AAD06749;
XX
XX
XX 10-AUG-2001 (first entry)
XX

```

```

DE T7-Caspase-human-pro-Asp-2(a) delta TM protein cDNA.
XX
XX
XX Human: alpha-secretase; amyloid precursor protein; APP; therapy;
XX Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp2a;
XX beta-secretase; caspase-Asp-2a delta TM; ss.
XX
XX Homo sapiens.
XX
XX Synthetic.
XX
XX FH Key Location/Qualifiers
XX FT CDS 1..1380
XX FT /tag= a
XX FT /product= "T7-Caspase-human-pro-Asp-2(a) delta TM
XX FT protein"
XX
XX PN WO200123533-A2.
XX
XX
XX 05-APR-2001.
XX
XX 22-SEP-2000; 2000MO-US026080.
XX
XX PF
XX
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99MO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX PI Gurney M, Bienkowski MJ;
XX
XX WPI; 2001-290516/30.
XX P-PSDB; AAE02591.
XX
XX
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX protein, useful for the treatment of Alzheimer's disease.
XX
XX Example 9; Fig 7; 189pp; English.
XX
XX The present invention relates to enzymes for cleaving the alpha-
XX secretase site of the amyloid precursor protein (APP) and methods of
XX identifying those enzymes. The methods may be used to identify enzymes
XX that may be used to cleave the alpha-secretase cleavage site of the APP
XX protein. The enzymes may be used to treat or modulate the progress of
XX Alzheimer's disease. The present sequence is a cDNA encoding human
XX aspartyl protease 2a (Asp 2a) caspase delatm protein which is obtained
XX by deleting the transmembrane domain and adding a T7-caspase leader
XX sequence at the N-terminal end. This sequence has beta-secretase protease
XX activity
XX
XX SO Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD06749 ..
XX
XX Alignment segment 1/1: (-)
XX
XX      Quality:      32.00      EScore:      264
XX      Matching length:      11      Total length:      11
XX      Matching Percent Similarity:      81.82      Matching Percent Identity:      54.55
XX      Total Percent Similarity:      81.82      Total Percent Identity:      54.55
XX      Gaps:      0
XX
XX Alignment:
XX
XX      27 ArgLeuProLeuArgSerGIyleuGIyGIyAla      37
XX      ::::|||||:|||||:|||||:|||||:|||||:      165
XX      197 AAGCTGCCCCCTCCGGCCGGGCTCTCTCGGGCTCT
XX
XX Sequence name: trnp2ndb:AA06753
XX
XX Sequence documentation:
XX ID AAD06753 standard; cDNA; 1380 BP.
XX
XX AC AAD06753;
XX

```

```

XX 10-AUG-2001 (first entry)
XX
XX Human-Asp-2(a) deltatm (His) 6 protein cDNA.
XX
XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;
XX Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a;
XX beta-secretase; Asp-2a deltatm; histidine tag; mutant; ss.
XX
XX Homo sapiens.
XX Synthetic.
OS
OS
XX Key
XX CDS
XX      Location/Qualifiers
XX      1..1383
XX      /*tag= a
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XX      /transl_except= (pos:1360..1362, aa:His)
XX      /transl_except= (pos:1363..1365, aa:His)
XX      /transl_except= (pos:1366..1368, aa:His)
XX      /transl_except= (pos:1369..1371, aa:His)
XX      /transl_except= (pos:1372..1374, aa:His)
XX      /transl_except= (pos:1375..1377, aa:His)
XX
XX MO200123533-A2.
XX
XX 05-APR-2001.
XX
XX 22-SEP-2000; 2000WO-US026080.
XX
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99MO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX Gurney M, Bienkowski MJ;
XX WPI; 2001-290516/30.
XX P-PSDB; AA025595.
XX
XX Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX protein, useful for the treatment of Alzheimer's disease.
XX
XX Example 10; Page 160-161, 189pp; English.
XX
XX The present invention relates to enzymes for cleaving the alpha-
XX secretase site of the amyloid precursor protein (APP) and methods of
XX identifying those enzymes. The methods may be used to identify enzymes
XX that may be used to cleave the alpha-secretase cleavage site of the APP
XX protein. The enzymes may be used to treat or modulate the progress of
XX Alzheimer's disease. The present sequence is a cDNA encoding human
XX aspartyl protease 2a (Asp 2a) deltatm (His)6 protein which is obtained by
XX deleting the transmembrane domain and adding a histidine tag at the C-
XX terminal end. This sequence has beta-secretase protease activity
XX
XX Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD06753
XX
XX Alignment segment 1/1: (-)
XX
XX      Quality: 32.00      Score: 264
XX      Matching length: 11      Total length: 11
XX      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
XX      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
XX
XX Alignment:
XX 27 ArgLeuProLeuArgSerGlyLeuGlyGlyala      37
XX ::::::::::::::::::::
XX ::::::::::::::::::::

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179 AAGTGTCCCTCCGCGCGCTCTCGGCTCT      147
Sequence name: rngp2ndb.AA511531
Sequence documentation:
ID AA511531 standard; cDNA; 1380 BP.
XX
XX AA511531;
XX
XX 24-OCT-2001 (first entry)
XX
XX Human cDNA encoding Human-pro-Asp 2(a) delta TM (His) 6.
XX
XX Human; Aspartyl protease; beta-secretase; neurotropic; ASP2;
XX neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
XX amyloid-beta; Abeta; Human-pro-Asp 2(a) delta TM (His) 6; ss; mutant.
XX
XX Homo sapiens.
XX Synthetic.
OS
OS
XX Key
XX CDS
XX      Location/Qualifiers
XX      1..1380
XX      /*tag= a
XX      /product= "Human-pro-Asp 2(a) delta TM (His) 6"
XX      /transl_except= (pos:639..642, aa:Gln)
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XX      His)
XX      sig_peptide
XX      1..63
XX      /*tag= b
XX      mat_peptide
XX      64..1377
XX      /*tag= c
XX      /label= Mature_Human_pro_Asp_2(a)_delta_TM_(His) 6
XX
XX MO200149098-A2.
XX
XX 12-JUL-2001.
XX
XX 09-MAY-2001; 2001WO-IB000798.
XX
XX 09-MAY-2001; 2001WO-IB000798.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURN/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-502549/55.
XX P-PSDB; AA006617.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 10; Page 162; 185pp; English.
XX
XX The invention relates to a purified polypeptide comprising a fragment of
XX mammalian aspartyl protease (Asp) 2 protein which lacks the Asp2
XX transmembrane domain and the Asp2 protein, and where the polypeptide and
XX the fragment retain the beta-secretase activity of the mammalian Asp2
XX protein. The invention also details polynucleotides for the Asp proteins
XX and vectors expressing them, and a polypeptide (isoform of amyloid
XX protein precursor (APP) comprising the amino acid sequence of an APP or
XX its fragment containing an APP cleavage site recognizable by a mammalian
XX beta-secretase, and further comprising two lysine residues at the
XX carboxyl terminus of the amino acid sequence of the mammalian APP or APP
XX fragment. Also included in the invention are methods of identifying
XX modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are
XX useful for treating Alzheimer's disease. APP is useful in methods for
XX identifying inhibitors or modulators of human Asp2 activity and amyloid-

```

CC beta (Abeta) peptide production. APP is also useful in designing  
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP  
 CC comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is  
 CC associated with increased levels of Abeta processing is useful in assays  
 CC relating the Alzheimer's research. The expression vector is useful for  
 CC recombinantly expressing APP. Nucleic acids that hybridise to Asp  
 CC oligonucleotides are useful as probes or primers. The probes are useful  
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and  
 CC Southern blots. The present sequence encodes Human-pro- Asp 2(a) delta TM  
 CC protein, which lacks the C-terminal transmembrane domain and has a His  
 CC tag to aid purification

XX Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11531 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCGCGGCTCTCGGCGCTCT  147

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Sequence name: rngp2ndb:AAS11527

Sequence documentation:

ID AAS11527 standard; cDNA; 1380 BP.

AC AAS11527;

DT 24-OCT-2001 (first entry)

DE Human T7-Caspase-Human-pro-Asp 2(a) delta TM fusion protein cDNA.

XX Human; Aspartyl protease; beta-secretase; nootropic; ASP2;

KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

XX amyloid-beta; Abeta; T7-Caspase-Human-pro-Asp 2(a) delta TM; ss.

OS Homo sapiens.

OS Synthetic.

Key Location/Qualifiers

FT CDS

FT sig\_peptide

FT mat\_peptide

XX WO200149098-A2.

PD 12-JUL-2001.

XX 09-MAY-2001; 2001MO-IB000798.

PR 09-MAY-2001; 2001MO-IB000798.

XX (BIEN/) BIENKOWSKI M J.

PA (GURN/) GURNEY M E.

PA (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.

XX (YANK/) YANK R.

PI Bienkowi MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 XX WPI, 2001-502549/55.  
 DR P-PSDB; AA006613.  
 XX Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.

XX Example 9; Fig 7; 185pp; English.

XX The invention relates to a purified polypeptide comprising a fragment of  
 CC mammalian aspartyl protease (Asp) 2 protein which lacks the Asp2  
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and  
 CC the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. The invention also details polynucleotides for the Asp proteins  
 CC and vectors expressing them, and a polypeptide (isoform of amyloid  
 CC protein precursor (APP)) comprising the amino acid sequence of an APP or  
 CC its fragment containing an APP cleavage site recognizable by a mammalian  
 CC beta-secretase, and further comprising two lysine residues at the  
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP  
 CC fragment. Also included in the invention are methods of identifying  
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
 CC useful for treating Alzheimer's disease. APP is useful in methods for  
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-  
 CC beta (Abeta) peptide production. APP is also useful in designing  
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP  
 CC comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is  
 CC associated with increased levels of Abeta processing is useful in assays  
 CC relating the Alzheimer's research. The expression vector is useful for  
 CC recombinantly expressing APP. Nucleic acids that hybridise to Asp  
 CC oligonucleotides are useful as probes or primers. The probes are useful  
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and  
 CC Southern blots. The present sequence encodes T7-Caspase- Human-pro-Asp  
 CC 2(a) delta TM fusion protein which has a N-terminal T7 tag to aid  
 CC purification when expressed in E. coli and a Caspase leader sequence  
 XX

Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11527 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|
197 AAGCTGCCCTCCGCGCGGCTCTCGGCGCTCT  165

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Sequence name: rngp2ndb:ABL52471

Sequence documentation:

ID ABL52471 standard; cDNA; 1380 BP.

AC ABL52471;

DT 16-JUL-2002 (first entry)

DE Human Asp-2(a)deltaTM(His)6 nucleotide sequence SEQ ID NO:31.

XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;

XX chromosome 11q23.3-24.1; gene; ss.

OS Homo sapiens.

OS Key

XX Location/Qualifiers

FT CDS 1. .1380  
 FT /\*tag= a  
 FT /product= "Human Asp-2(a)deltaTM(His)6"  
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 FT /transl\_except= (pos:1360. .1362,aa:His)  
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 FT /transl\_except= (pos:1366. .1368,aa:His)  
 FT /transl\_except= (pos:1369. .1371,aa:His)  
 FT /transl\_except= (pos:1372. .1374,aa:His)  
 FT /transl\_except= (pos:1375. .1377,aa:His)  
 FT  
 FT GB2367060-A:  
 FT  
 FT 27-MAR-2002.  
 FT  
 FT 29-OCT-2001; 2001GB-00025934.  
 FT  
 FT 23-SEP-1999; 99US-00404133.  
 FT 23-SEP-1999; 99US-0155493P.  
 FT 23-SEP-1999; 99MO-US020881.  
 FT 13-OCT-1999; 99US-00416901.  
 FT 06-DEC-1999; 99US-0169232P.  
 FT 22-SEP-2000; 2000GB-00023315.  
 FT  
 FT (PHAA ) PHARMACIA & UPJOHN CO.  
 FT  
 FT Bienkowski MJ, Gurney M;  
 FT WPI; 2002-397167/43.  
 FT P-PSDB; ABB78600.  
 FT  
 FT Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
 FT protease activity, e.g. for the diagnosis of Alzheimer's disease.  
 FT  
 FT Example 10; Page 132; 182pp; English.  
 FT  
 FT The present invention describes a human aspartyl protease 1 (hu-Asp1)  
 FT and which comprises a peptide of no more than 50 amino acids,  
 FT and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
 FT Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
 FT proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
 FT (1) under acidic conditions; and (b) determining the level of hu-Asp1  
 FT proteolytic activity; (2) a purified polynucleotide (III) comprising a  
 FT nucleotide sequence that hybridises under stringent conditions to the non  
 FT coding strand complementary to a defined 1804 nucleotide sequence (see  
 FT ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1  
 FT proteolytic activity and lacks nucleotides encoding a transmembrane  
 FT domain; (3) a purified polynucleotide (III') comprising a sequence that  
 FT hybridises under stringent conditions to (III) (the nucleotide sequence  
 FT encodes a polypeptide further lacking a pro-peptide domain corresponding  
 FT to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)  
 FT comprising (III) or (III') and (5) a host cell (V) transformed or  
 FT transfected with (III), (III') and/or (IV). The hu-Asp1 protease  
 FT substrate (I) may be used as an enzyme substrate in assays to detect  
 FT aspartyl protease activity, (II) and therefore diagnose diseases  
 FT associated with aberrant hu-Asp1 expression and activity such as  
 FT Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
 FT hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
 FT sequence encodes human Asp-2(a)deltaTM(His)6, which is given in an  
 FT example from the present invention  
 FT  
 FT SQ Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;  
 FT  
 FT Alignment of: us-10-726-967a-1 x ABL52471 ..  
 FT  
 FT Alignment segment 1/1: (-)  
 FT  
 FT Matching Length: 32.00  
 FT Matching Percent Similarity: 81.82  
 FT Total Percent Similarity: 81.82  
 FT Gaps: 0  
 FT  
 FT Total Length: 264  
 FT Matching Percent Identity: 54.55  
 FT Total Percent Identity: 54.55

Alignment:  
 27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
 179 AAGCGCCCTCCGCGCGGCTCCGCGGCTCT 147  
 Sequence name: rngp2ndb:ABL52467  
 Sequence documentation:  
 ID ABL52467 standard; cDNA; 1380 BP.  
 AC ABL52467;  
 AC  
 AC 16-JUL-2002 (first entry)  
 DT  
 DT  
 DE T7-caspase-human-pro-Asp-2(a)deltaTM nucleotide sequence SEQ ID NO:23.  
 XX  
 XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;  
 KM amyloid precursor protein; APP; gene; ss.  
 XX  
 XX Homo sapiens.  
 OS  
 FH Key Location/Qualifiers  
 FT 1. .1380  
 FT CDS /\*tag= a  
 FT /product= "T7-caspase-human-pro-Asp-2(a)deltaTM"  
 FT  
 FT GB2367060-A.  
 FT  
 FT 27-MAR-2002.  
 FT  
 FT 29-OCT-2001; 2001GB-00025934.  
 FT  
 FT 23-SEP-1999; 99US-00404133.  
 FT 23-SEP-1999; 99US-0155493P.  
 FT 23-SEP-1999; 99MO-US020881.  
 FT 13-OCT-1999; 99US-00416901.  
 FT 06-DEC-1999; 99US-0169232P.  
 FT 22-SEP-2000; 2000GB-00023315.  
 FT  
 FT (PHAA ) PHARMACIA & UPJOHN CO.  
 FT  
 FT Bienkowski MJ, Gurney M;  
 FT WPI; 2002-397167/43.  
 FT P-PSDB; ABB78600.  
 FT  
 FT Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
 FT protease activity, e.g. for the diagnosis of Alzheimer's disease.  
 FT  
 FT Example 9; Fig 7; 182pp; English.  
 FT  
 FT The present invention describes a human aspartyl protease 1 (hu-Asp1)  
 FT substrate (I) which comprises a peptide of no more than 50 amino acids,  
 FT and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
 FT Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
 FT proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
 FT (1) under acidic conditions; and (b) determining the level of hu-Asp1  
 FT proteolytic activity; (2) a purified polynucleotide (III) comprising a  
 FT nucleotide sequence that hybridises under stringent conditions to the non  
 FT coding strand complementary to a defined 1804 nucleotide sequence (see  
 FT ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1  
 FT proteolytic activity and lacks nucleotides encoding a transmembrane  
 FT domain; (3) a purified polynucleotide (III') comprising a sequence that  
 FT hybridises under stringent conditions to (III) (the nucleotide sequence  
 FT encodes a polypeptide further lacking a pro-peptide domain corresponding  
 FT to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)  
 FT comprising (III) or (III') and (5) a host cell (V) transformed or  
 FT transfected with (III), (III') and/or (IV). The hu-Asp1 protease  
 FT substrate (I) may be used as an enzyme substrate in assays to detect  
 FT aspartyl protease activity, (II) and therefore diagnose diseases  
 FT associated with aberrant hu-Asp1 expression and activity such as  
 FT Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while







PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;  
 XX WPI: 2004-236722/22.  
 DR P-PSDB; ADJ94336.  
 XX  
 PT Identifying agents that modulate activity of Asp2 aspartyl protease  
 PT useful for treating or preventing Alzheimer's disease involves comparing  
 PT APP processing activity of protease in presence and absence of test  
 PT agent.  
 XX  
 PS Example 9; SEQ ID NO 23; 109pp; English.  
 XX  
 CC The invention relates to identifying agents that modulate activity of  
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 CC precursor protein (APP) in the presence and absence of a test agent,  
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated  
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy termini amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw  
 CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the activity  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease. Preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease  
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a  
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2  
 CC proteins.  
 XX  
 SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ADJ94335 ..  
 Alignment segment 1/1: (-)  
 Quality: 32.00      Score: 264  
 Matching length: 11      Total length: 11  
 Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55  
 Total Percent Similarity: 81.82      Total Percent Identity: 54.55  
 Gaps: 0  
 Alignment:  
 27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37  
 ::::|||||:|||||:      ::::|||||:  
 197 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT      165  
 Sequence name: rngp2ndb:AD050431  
 Sequence documentation:  
 ID AD050431 standard; DNA, 1380 BP.  
 XX  
 AC AD050431;  
 XX  
 XX 29-JUL-2004 (first entry)  
 XX  
 DE T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric DNA.  
 XX  
 XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;  
 KW Alzheimer's disease; gene therapy; caspase; human; gene; chimeric; ds.

XX Homo sapiens.  
 OS Chimeric.  
 OS Unidentified.  
 OS  
 XX  
 FH Key      Location/Qualifiers  
 FT CDS      1..1380  
 FT      /\*tag= a  
 FT      /product= "T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric  
 FT      protein"  
 FT  
 XX  
 XX US6737510-B1.  
 XX  
 XX 18-MAY-2004.  
 XX  
 XX 12-APR-2000; 2000US-00548373.  
 XX  
 XX 24-SEP-1998; 98US-0101594P.  
 XX 23-SEP-1999; 99US-00404133.  
 XX 23-SEP-1999; 99US-0155493P.  
 XX 23-SEP-1999; 99WO-05020881.  
 XX 13-OCT-1999; 99US-00416901.  
 XX  
 PA (PNUA ) PHARMACIA & UPJOHN CO.  
 XX  
 PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;  
 XX WPI: 2004-387112/36.  
 DR P-PSDB; AD050432.  
 XX  
 XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG  
 PT involved in processing amyloid precursor protein into amyloid beta,  
 PT useful in preparing a composition for treating or preventing Alzheimer's  
 PT disease.  
 XX  
 XX Example 9; SEQ ID NO 23; 109pp; English.  
 XX  
 PS The invention relates to a method for identifying an agent that decreases  
 CC the protease activity of the aspartyl protease (Asp) polypeptide. It also  
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
 CC cleavage site of the amyloid precursor protein (APP). The invention is  
 CC useful in preparing a composition for treating or preventing Alzheimer's  
 CC disease. It is also useful in gene therapy. The present sequence is T7-  
 CC Caspase-Human-pro-Asp-2(a)deltaTM chimeric DNA. This sequence is used to  
 CC illustrate the method of the invention.  
 XX  
 SQ Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x AD050431 ..  
 Alignment segment 1/1: (-)  
 Quality: 32.00      Score: 264  
 Matching length: 11      Total length: 11  
 Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55  
 Total Percent Similarity: 81.82      Total Percent Identity: 54.55  
 Gaps: 0  
 Alignment:  
 27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37  
 ::::|||||:|||||:      ::::|||||:  
 197 AAGCTGCCCCCTCCGGCGGCTCTCGGCTCT      165  
 Sequence name: rngp2ndb:AD050439  
 Sequence documentation:  
 ID AD050439 standard; DNA, 1380 BP.  
 XX  
 AC AD050439;  
 XX  
 XX 29-JUL-2004 (first entry)  
 XX

DE Human Asp-2(a)deltaTM(His)6 DNA.

XX Apatryl protease; Asp; beta secretase; amyloid precursor protein; APP;  
XX Alzheimer's disease; gene therapy; human; gene; ds.  
XX  
OS Homo sapiens.  
XX Synthetic.  
XX

PH

FT Key Location/Qualifiers  
FT CDS 1..1380  
FT     /\*tag= a  
FT     /product= "Human Asp-2(a)deltaTM(His)6 protein"

FT     /transl\_except= (pos:640..662, aa:Gln)  
FT     /transl\_except= (pos:1360..1362, aa:His)  
FT     /transl\_except= (pos:1363..1365, aa:His)  
FT     /transl\_except= (pos:1366..1368, aa:His)  
FT     /transl\_except= (pos:1369..1371, aa:His)  
FT     /transl\_except= (pos:1372..1374, aa:His)  
FT     /transl\_except= (pos:1375..1377, aa:His)

XX  
XX US6737510-B1.  
XX  
XX  
XX PD 18-MAY-2004.  
XX  
XX PF 12-APR-2000; 2000US-00548373.  
XX  
XX PR 24-SEP-1998; 98US-00101594P.  
XX PR 23-SEP-1999; 99US-00404133.  
XX PR 23-SEP-1999; 99US-0155493P.  
XX PR 23-SEP-1999; 99WO-US020881.  
XX PR 13-OCT-1999; 99US-00416901.  
XX  
XX PA (PHNA ) PHARMACIA & UPJOHN CO.  
XX  
XX E1 Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
XX  
XX DR WPI; 2004-387112/36.  
XX P-PsDB; AD050440.  
XX

PT New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG  
PT involved in processing amyloid precursor protein into amyloid beta,  
PT useful in preparing a composition for treating or preventing Alzheimer's  
PT disease.  
XX  
XX PS Example 10; SEQ ID NO 31, 108pp; English.

CC The invention relates to a method for identifying an agent that decreases  
CC the protease activity of the aspartyl protease (Asp) polypeptide. It also  
CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
CC cleavage site of the amyloid precursor protein (APP). The invention is  
CC useful in preparing a composition for treating or preventing Alzheimer's  
CC disease. It is also useful in gene therapy. The present sequence is human  
CC Asp-2(a)deltaTM(His)6 DNA. This sequence is used to illustrate the method  
CC of the invention.  
XX  
XX SQ Sequence 1380 BP; 290 A; 406 C; 402 G; 282 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050443 ..

Alignment segment 1/1: (-)

	Quality:	32.00		Score:	264
Matching length:	11	Total length:	11		
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55		
Total Percent Similarity:	Gaps: 0	Total Percent Identity:	54.55		

Alignment:

27	ArlgeuProleaurgerserqyleuclglyala	37
179	AAAGTGGCCCCCGGCCGCGGTCTCTCGGGCTCT	147

Sequence name: ringp2ndb:ADR75344

Sequence documentation:  
ID ADR75344 standard; DNA; 1380 BP.  
XX  
XX ADR75344;  
XX  
XX 18-NOV-2004 (first entry)  
DT  
XX T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric DNA.  
DE  
XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;  
XX chromosome identification; Alzheimer's disease; human; caspase; chimeric;  
KW gene; ds.  
XX  
XX Homo sapiens.  
OS Chimeric.  
OS Unidentified.  
XX  
XX Key Location/Qualifiers  
FH CDS 1..1380  
FT /\*tag= a  
FT /product= "T7-Caspase-Human-pro-Asp-2(a)deltaTM chimeric  
FT protein"  
XX  
XX US2004166507-A1.  
XX  
XX 26-AUG-2004.  
PD  
XX 29-AUG-2003; 2003US-00652045.  
PF  
XX 24-SEP-1998; 98US-0101594P.  
PR 23-SEP-1999; 99US-00404133.  
PR 23-SEP-1999; 99US-0155493P.  
PR 13-OCT-1999; 99US-00416901.  
XX  
XX (GURN/) GURNEY M E.  
PA (BIEN/) BIENKOWAKI M J.  
PA (HEIN/) HEINRIKSON R L.  
PA (PARO/) PARODI L A.  
PA (YANR/) YAN R.  
XX  
XX Gurney ME, Bienkowaki MJ, Heinrichson RL, Parodi LA, Yan R,  
XX  
XX WPI; 2004-624916/60.  
DR P-PSDB; ADR75345.  
XX  
XX Novel purified/isolated polynucleotide encoding polypeptide having  
PT aspartyl protease activity involved in processing amyloid precursor  
PT protein into amyloid beta, useful in identifying agent decreasing  
PT activity of aspartyl protease.  
XX  
XX Example 9; SEQ ID NO 23; 107bp; English.  
XX  
XX The invention relates to nucleic acid sequences encoding aspartyl  
CC protease (App) polypeptides having aspartyl protease activity involved in  
CC processing amyloid precursor protein (APP) into amyloid beta. The  
CC invention also relates to a method for identifying an agent that  
CC decreases the protease activity of the App. App DNA is useful in  
CC chromosome identification as they can hybridise with a specific location  
CC on a human chromosome and in identifying the relationship between genes  
CC and diseases (particular gene responsible for causing diseases). It is  
CC also useful for identifying candidates to modulate the progression of  
CC Alzheimer's disease. App is useful in raising antibodies that are useful  
CC in diagnostic assay for detecting Hu-App polypeptide expression. The  
CC present sequence is the human T7-Caspase-Human-pro-Asp-2(a)deltaTM  
CC chimeric DNA. This sequence is used to illustrate the method of the  
CC invention.  
XX  
XX Sequence 1380 BP; 297 A; 397 C; 398 G; 288 T; 0 U; 0 Other;  
XX

Alignment of: us-10-726-967a-1 x ADR75344 ..





PS Claim 1; Fig 1; 145bp; English.

XX This invention relates to 3 nucleotide sequences encoding beta-secretase  
CC proteins. Beta-secretase is an enzyme involved in the production of one  
CC of the components of amyloid plaques involved in Alzheimer's disease. The  
CC invention includes an expression vector comprising the nucleotide  
CC sequence, a host cell comprising the expression vector, and a process for  
CC producing the protein through culturing the transformed cells. Also  
CC included in the invention are a polypeptide derivative of the beta-  
CC secretase protein, a fusion protein comprising beta-secretase fused to a  
CC heterologous amino acid sequence, and a method for modulating the levels  
CC of beta-secretase polypeptide in a mammal comprising administering the  
CC polynucleotide sequence. Beta-secretase exhibits neuroprotective and  
CC neurotropic activity. The beta-secretase nucleotide sequence may be used to  
CC map locations of the beta-secretase gene and related genes on chromosomes  
CC and as hybridization probes in diagnostic assays to test for the presence  
CC of beta-secretase DNA or RNA, such as in Alzheimer's disease, Down's  
CC syndrome, and amyloid angiopathy. The nucleotide sequence may also be  
CC used as anti-sense inhibitors of beta-secretase expression, in gene  
CC therapy of Alzheimer's disease, and for the identification of compounds  
CC that modulate beta-secretase activity. Antibodies to the beta-secretase  
CC protein may be used for in vitro and in vivo diagnostic purposes to  
CC detect the presence of beta-secretase polypeptide in a body fluid or cell  
CC sample. The present sequence represents human cDNA encoding beta-  
CC secretase

XX Sequence 1503 BP; 305 A; 448 C; 431 G; 319 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAA28278 ..

Alignment segment 1/1: (-)

	Quality:	32.00	Score:	264
Matching length:	11		11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
Gaps:	0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCCGCCGCTCTCGGCTCT 147
```

Sequence name: rmgp2ndb:AAA28280

Sequence documentation:  
ID AAA28280 standard; cDNA; 1503 BP.

XX AAA28280;

XX 12-FEB-2001 (first entry)

DE Rat cDNA encoding beta-secretase.

XX Beta-secretase; enzyme; amyloid plaque; Alzheimer's disease; rat;  
KW Down's syndrome; amyloid angiopathy; gene therapy; neuroprotective; ss.

OS Rattus sp.

XX Key Location/Qualifiers

FT CDS 1..1503  
FT /tag= a  
FT /product= "Beta secretase"  
FT /note= "No stop codon given"

XX MO200058479-A1.

XX 05-OCT-2000.

XX 23-MAR-2000; 2000WO-US007755.

XX 26-MAR-1999; 99US-00277229.

XX (AMGE-) AMGEN INC.

XX Clifton M, Vassar RJ, Bennett BD;

XX WPI; 2000-594643/56.

DR P-PSDB; AAY94769.

XX Isolated beta-secretase nucleic acids and encoded polypeptides, useful  
PT for diagnosis and gene therapy of Alzheimer's disease.

XX Claim 1; Fig 3; 145bp; English.

XX This invention relates to 3 nucleotide sequences encoding beta-secretase  
CC proteins. Beta-secretase is an enzyme involved in the production of one  
CC of the components of amyloid plaques involved in Alzheimer's disease. The  
CC invention includes an expression vector comprising the nucleotide  
CC sequence, a host cell comprising the expression vector, and a process for  
CC producing the protein through culturing the transformed cells. Also  
CC included in the invention are a polypeptide derivative of the beta-  
CC secretase protein, a fusion protein comprising beta-secretase fused to a  
CC heterologous amino acid sequence, and a method for modulating the levels  
CC of beta-secretase polypeptide in a mammal comprising administering the  
CC polynucleotide sequence. Beta-secretase exhibits neuroprotective and  
CC neurotropic activity. The beta-secretase nucleotide sequence may be used to  
CC map locations of the beta-secretase gene and related genes on chromosomes  
CC and as hybridization probes in diagnostic assays to test for the presence  
CC of beta-secretase DNA or RNA, such as in Alzheimer's disease, Down's  
CC syndrome, and amyloid angiopathy. The nucleotide sequence may also be  
CC used as anti-sense inhibitors of beta-secretase expression, in gene  
CC therapy of Alzheimer's disease, and for the identification of compounds  
CC that modulate beta-secretase activity. Antibodies to the beta-secretase  
CC protein may be used for in vitro and in vivo diagnostic purposes to  
CC detect the presence of beta-secretase polypeptide in a body fluid or cell  
CC sample. The present sequence represents rat cDNA encoding beta-secretase

XX Sequence 1503 BP; 324 A; 428 C; 419 G; 332 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAA28280 ..

	Quality:	32.00	Score:	264
Matching length:	11		11	
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55	
Total Percent Similarity:	81.82	Total Percent Identity:	54.55	
Gaps:	0			

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||::|::|::|::|::|::|::|::|
179 AAGCTGCCCTCCGCCGCCGCTCTCAGGTTCC 147
```

Sequence name: rmgp2ndb:AAA59550

Sequence documentation:  
ID AAA59550 standard; DNA; 1503 BP.

XX AAA59550;

XX 14-NOV-2000 (first entry)

DE DNA encoding a human beta-secretase enzyme.

XX Beta-secretase; beta-amyloid precursor protein; beta-amyloid peptide;  
KW amyloid plaque component; Alzheimer's disease; amyloidogenic disease;  
KW inhibitor; ss.

XX Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1503

FT /tag= a  
FT /product= "beta-secretase"  
FT /note= "no termination codon given"  
PN WO200047618-A2.  
PD 17-AUG-2000.  
PP 10-FEB-2000; 2000MO-US003819.  
XX  
XX 10-FEB-1999; 99US-0119571P.  
PR 15-JUN-1999; 99US-0139172P.  
XX  
PA (ELAN-) ELAN PHARM INC.  
XX  
PI Anderson JP, Basi G, Doane MT, Frigon N, John V, Power M,  
PI Sinha S, Tatsuno G, Tung J, Wang S, Mcconlogue L;  
DR WPI; 2000-533011/48.  
XX P-PSDB; AAB07896.  
PT Purified beta-secretase protein used in assays to discover inhibitors  
PT which can be used for the treatment of amyloidogenic diseases e.g.  
PT Alzheimer's disease.  
XX  
XX Disclosure; Fig 1A; 121pp; English.  
XX  
XX The specification describes a beta-secretase enzyme. The enzyme cleaves  
XX beta-amyloid precursor protein to produce beta-amyloid peptide. This  
XX enzyme is therefore implicated in the production of amyloid plaque  
XX components which accumulate in the brains of individuals afflicted with  
XX Alzheimer's disease. Inhibitors of beta-secretase are administered to a  
XX mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-  
XX like pathology to test if they maintain or improve cognitive ability or  
XX reduce the plaque burden. The compounds are used for the treatment of  
XX amyloidogenic diseases e.g. Alzheimer's disease. The present sequence  
XX encodes a human beta-secretase enzyme  
SQ Sequence 1503 BP; 305 A; 448 C; 431 G; 319 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x AAA59550 ..  
Alignment segment 1/1: (-)  
Matching length: 32.00  
Matching Percent Similarity: 81.82  
Total Percent Similarity: 81.82  
Gaps: 0  
Total length: 264  
Total Percent Identity: 54.55  
Total Percent Identity: 54.55  
Alignment:  
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|:::|:::|  
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147  
Sequence name: rngp2ndb:ACC84849  
Sequence documentation:  
ID ACC84849 standard; DNA; 1506 BP.  
XX  
XX ACC84849;  
XX  
XX 12-SEP-2003 (first entry)  
XX  
XX Human memapsin 2 protein encoding DNA.  
XX  
XX Memapsin 1; neurotrophic; neuroprotective; memapsin 2; beta secretase;  
XX beta-amyloid protein; Alzheimer's disease; human; gene; ds.  
XX  
XX Homo sapiens.  
XX  
XX Key Location/Qualifiers

FT CDS 1..1506  
FT /tag= a  
FT /product= "memapsin 2"  
FT sig\_peptide 1..63  
FT /tag= b  
FT mat\_peptide 64..1503  
FT /tag= c  
XX  
XX WO20003039454-A2.  
XX  
XX 15-MAY-2003.  
XX  
XX 23-OCT-2002; 2002MO-US034324.  
XX  
XX 23-OCT-2001; 2001US-0335952P.  
PR 27-NOV-2001; 2001US-0333545P.  
PR 14-JAN-2002; 2002US-0348464P.  
PR 14-JAN-2002; 2002US-0348615P.  
PR 20-JUN-2002; 2002US-0390804P.  
PR 19-JUL-2002; 2002US-0397557P.  
PR 19-JUL-2002; 2002US-0397619P.  
XX  
XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.  
PA (UNIT ) UNIT ILLINOIS FOUND.  
XX  
PI Ghosh AK, Tang J, Bilcer G, Chang W, Hong L, Koelsch G, Loy J;  
PI Turner RT;  
XX  
XX WPI; 2003-541410/51.  
DR P-PSDB; ABR61928.  
XX  
XX New peptide compounds are memapsin beta secretase inhibitors used for  
XX treating Alzheimer's disease.  
XX  
XX Claim 101; Fig 8; 407pp; English.  
XX  
XX The invention relates to peptide compounds of specified formula. The  
XX compounds exhibit memapsin 2-beta secretase inhibitory activity relative  
XX to memapsin 1-beta secretase and reduce the accumulation of beta-amyloid  
XX protein. The compounds can be used for treating Alzheimer's disease. The  
XX present sequence represents a human memapsin 2 protein encoding DNA  
XX (Genbank Index (GI):21040369)  
SQ Sequence 1506 BP; 306 A; 449 C; 431 G; 320 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x ACC84849 ..  
Alignment segment 1/1: (-)  
Matching length: 32.00  
Matching Percent Similarity: 81.82  
Total Percent Similarity: 81.82  
Gaps: 0  
Total length: 264  
Total Percent Identity: 54.55  
Total Percent Identity: 54.55  
Alignment:  
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|:::|:::|  
179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147  
Sequence name: rngp2ndb:ADL18183  
Sequence documentation:  
ID ADL18183 standard; CDNA; 1506 BP.  
XX  
XX ADL18183;  
XX  
XX 06-MAY-2004 (first entry)  
XX  
XX Human APP beta-secretase encoding CDNA SEQ ID NO:103.  
XX  
XX chimeric protein; signal protein; trafficking signal targeting;  
XX

KM proteolytic cleavage site; protease; protease inhibitor; enzyme; human;  
 KM APP beta-secretase; gene; ss.  
 OS Homo sapiens.  
 XX MO2003014381-A1.  
 XX 20-FEB-2003.  
 PD 20-FEB-2003.  
 XX 08-AUG-2002; 2002WO-KR001515.  
 PF 10-AUG-2001; 2001KR-00048123.  
 XX (AHRM-) AHRM BIOSYSTEMS INC.  
 PA Hwang I, Kim DH, Lee YJ;  
 PI WPI; 2003-256596/25.  
 DR P-PSDB; ADL18184.  
 DR New chimeric protein, useful for detecting protease inhibitors inside the  
 XX cell or tissue.  
 PT  
 PS Disclosure; SEQ ID NO 103; 214pp; English.  
 XX The present invention describes a chimeric protein comprising at least  
 CC one signal protein that has a trafficking signal targeting to a  
 CC subcellular organelle and at least one proteolytic cleavage site for a  
 CC protease. The chimeric protein is constructed, so that: (a) the  
 CC trafficking signals of all the signal proteins are inactivated by linking  
 CC the proteolytic site or a signal masking protein through the proteolytic  
 CC site to the N-or C- terminus of the signal proteins, and so the chimeric  
 CC protein is present in cytosol; (b) the trafficking signal of at least one  
 CC signal protein is activated when the proteolytic cleavage site is cleaved  
 CC by the protease, and as a result at least one fragment protein that  
 CC includes the activated signal protein is a transported to a subcellular  
 CC organelle; and (c) the chimeric protein is labelled with at least one  
 CC fluorescent protein and the position and intensity distribution of the  
 CC fluorescent label signal in the cell is altered depending on the cleavage  
 CC by the protease. Also described: (1) a recombinant gene comprising a  
 CC nucleic acid sequence encoding the chimeric protein which is constructed  
 CC to express the chimeric protein in a cell; (2) a cell transformed with  
 CC the recombinant gene or vector; (3) analysing the activity of a protease  
 CC in vivo; (4) screening protease inhibitors in vivo; (5) a system for  
 CC detecting a protease inside a cell; (6) a nucleic acid comprising the  
 CC sequence encoding the chimeric protein for detecting protease activity in  
 CC a cell; (7) a vector comprising the nucleic acid; (8) a kit for detecting  
 CC a protease inside a cell comprising the chimeric protein or the vector;  
 CC (9) detecting a protease inside a cell or tissue; and (10) detecting a  
 CC protease inhibitor in vivo. The chimeric protein is useful for detecting  
 CC protease inhibitors inside the cell or tissue. The present sequence  
 CC encodes a human APP beta-secretase, which is used in the exemplification  
 CC of the present invention.  
 XX  
 SQ Sequence 1506 BP; 306 A; 449 C; 431 G; 320 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ADL18183 ..  
 Alignment segment 1/1: (-)  

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27	ArgLeuProLeuArgSerGlyLeuGlyGlyAla	37
179	AAAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT	147

Sequence name: rngp2ndb:ADQ82259

Sequence documentation:  
 ID ADQ82259 standard; cDNA; 1524 BP.  
 XX  
 AC ADQ82259;  
 XX  
 DT 21-OCT-2004 (first entry)  
 XX  
 DE Human BACE1 coding sequence.  
 XX transgenic animal; beta-site amyloid precursor protein cleaving enzyme;  
 KW BACE1; Hemostatic; Neuroprotective; Noctropic; Beta-secretase inhibitor;  
 KW amyloid beta; neurodegenerative disease; Alzheimer's disease;  
 KW cerebral amyloid angiopathy; Lewy body dementia; Down's syndrome;  
 KW hereditary cerebral hemorrhage; amyloidosis; Guam Parkinson-Dementia; ss.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 PN MO2004062627-A2.  
 XX 29-JUL-2004.  
 PD 29-JUL-2004.  
 XX  
 PF 13-JAN-2004; 2004WO-US000883.  
 XX  
 PR 13-JAN-2003; 2003US-0439633P.  
 XX  
 PA (REGC ) UNIV CALIFORNIA.  
 XX  
 PI Maelliah E, Rockenstein E;  
 XX WPI; 2004-544036/52.  
 DR  
 XX New non-human transgenic animal overexpressing the (human) beta-site  
 PT amyloid precursor protein cleaving enzyme (BACE1), useful as a model for  
 PT conditions such as Alzheimer's disease, and in screening for therapeutic  
 PT agents.  
 XX  
 PS Example 1; SEQ ID NO 1; 54pp; English.  
 XX  
 XX The present invention relates to a transgenic non-human animal for  
 CC overexpressing beta-site amyloid precursor protein cleaving enzyme  
 CC (BACE1) comprising cells containing a DNA transgene encoding for BACE1.  
 CC The transgenic non-human animal is useful as a disease model, in studying  
 CC the in vivo and in vitro regulation and effects of BACE1 in specific  
 CC tissue types, in examining the role of BACE1 proteins in the accumulation  
 CC of amyloid beta, and for developing therapies for amyloid beta-related  
 CC conditions. The method, agents or compositions are useful for treating  
 CC neurodegenerative disease, e.g. Alzheimer's disease, cerebral amyloid  
 CC angiopathy, Lewy body dementia, Down's syndrome, hereditary cerebral  
 CC hemorrhage with amyloidosis (Dutch type), or Guam Parkinson-Dementia  
 CC complex. The present sequence represents human BACE1 coding sequence.  
 CC  
 XX  
 SQ Sequence 1524 BP; 309 A; 456 C; 437 G; 322 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ADQ82259 ..  
 Alignment segment 1/1: (-)  

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27	ArgLeuProLeuArgSerGlyLeuGlyGlyAla	37
191	AAAGCTGCCCCCTCCGGCCGGGCTCTCGGGCTCT	159

Sequence name: rngp2ndb:ABA02406

## Sequence documentation:

ID ABA02406 standard; cDNA; 1527 BP.

AC ABA02406;

DT 26-FEB-2002 (first entry)

DE FLAG-tagged human beta-secretase encoding cDNA.

KM Human; beta-secretase; FLAG tag; inhibitor; amine compound; beta amyloid protein production; head injury; spinal injury;

KM amyloid precursor protein alpha secretion; nerve damage;

KM meningitis sequelae; cerebral paralysis; memory disorder; mental disease; neurotropic; neuroprotective; cerebroprotective; ss.

OS Homo sapiens.

OS Synthetic.

FH Key Location/Qualifiers

FT CDS 1..1527

FT /\*tag= a

FT /partial

FT /product= "FLAG-tagged human beta-secretase"

FT /note= "No stop codon given in the specification"

PN MO200187293-A1.

PD 22-NOV-2001.

PF 18-MAY-2001; 2001MO-JP004144.

PR 19-MAY-2000; 2000UP-00152758.

PA (TAKE ) TAKEDA CHEM IND LTD.

PI Miyamoto M, Matsui J, Fukumoto H, Tarui N;

DR WPI; 2002-055640/07.

DR P-PSDB; AAMS2697.

PT Beta-secretase inhibitor used for treating e.g. Alzheimer's disease and injury to brain or spine, and neurodegeneration, comprises amine compound.

PS Example; Page 78-79; 86pp; Japanese.

XX The invention relates to novel amine compounds which are beta-secretase inhibitors. The beta-secretase compounds also have the ability to promote amyloid precursor protein alpha secretion and to inhibit beta amyloid protein production. The beta-secretase inhibitors of the invention can be used for treating head or spinal injuries, nerve damage, sequelae of meningitis, cerebral paralysis, memory disorders and mental diseases. The present sequence represents cDNA encoding a FLAG-tagged human beta-secretase used in the exemplifications of the invention

SQ Sequence 1527 BP; 315 A; 451 C; 438 G; 323 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABA02406 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

## Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyA
:::|||||::|::|::|::|::|::|::|::|
179 AAGCTGCCCCCTCCGCGCGGCTCTGGGCTCT

```

## Sequence name: rngp2ndb:ADJ71857

Sequence documentation:

ID ADJ71857 standard; cDNA; 1527 BP.

AC ADJ71857;

DT 06-MAY-2004 (first entry)

DE Human cDNA SEQ ID NO: 6.

KM N-Substituted aryl carboxamide; neuroprotective; neurotropic; neuroleptic; muscular; antiparkinsonian; cerebroprotective; vasotropic; haemostatic; antiarteriosclerotic; antidepressant; neurodegeneration; nerve damage; memory disorders; psychiatric disease; myopathy; mild cognitive impairment; Alzheimer's disease; ss; gene; human.

OS Homo sapiens.

FH Key Location/Qualifiers

FT CDS 1..1527

FT /\*tag= a

PN MO2004014843-A1.

PD 19-FEB-2004.

PF 07-AUG-2003; 2003MO-JP010045.

PR 09-AUG-2002; 2002UP-00233231.

PA (TAKE ) TAKEDA CHEM IND LTD.

PI Uchikawa O, Aso K, Koike T, Tarui N, Hirai K;

DR WPI; 2004-238691/22.

DR P-PSDB; ADJ71858.

PT New/known aryl carboxamide derivatives as inhibitors of aspartic acid protease and beta secretase for treating Alzheimer's disease, neurodegeneration, nerve damage, memory disorders, psychiatric disease, myopathy and cognitive impairment.

PS Example 1; SEQ ID NO 6; 90pp; Japanese.

XX The invention relates to novel N-Substituted aryl carboxamide compounds (1) and their salts. A compound of the invention has neuroprotective, neurotropic, neuroleptic, muscular-gen., antiparkinsonian, cerebroprotective, vasotropic, haemostatic, antiarteriosclerotic, and antidepressant activity. The compounds are used to prevent and treat neurodegeneration, nerve damage, memory disorders, psychiatric disease, including myopathy, mild cognitive impairment, or Alzheimer's disease, including Down's syndrome, senile dementia, Parkinson's disease, Creutzfeldt-Jacob disease, amyotrophic lateral sclerosis, diabetic neuropathy, Huntington's disease, multiple sclerosis, cerebrovascular disorders, cerebral embolism, cerebral haemorrhage, cerebral arteriosclerosis, head injuries, spinal injuries, post-encephalitic disease, cerebral palsy, depression, panic disorder and schizophrenia. The present sequence is used in the exemplification of the invention.

SQ Sequence 1527 BP; 317 A; 447 C; 438 G; 325 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ71857 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

## Alignment:



27 ArgLeuProLeuArgSerGlyLeuGlyAla  
 :::::::::::::::::::::  
 179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT

37  
 147

Sequence name: rngp2ndb:ADP74534

Sequence documentation:

ID ADP74534 standard; cDNA; 1527 BP.

AC ADP74534;

DT 12-AUG-2004 (first entry)

DE Human indole compound-related beta-secretase cDNA.

XX indole; neuroprotective; nootropic; antiparkinsonian; myopathy;  
 KW neuropathy; memory defect; senile dementia; amnesia; mental illness;  
 KW neurodegenerative disease; Alzheimer's; Creutzfeldt Jacob; CJD;  
 KW amyotrophic lateral sclerosis; Parkinson's; beta-secretase; ss; gene;  
 KW human.

XX Homo sapiens.

XX Key Location/Qualifiers

XX CDS 1..1527

XX /tag= a  
 XX /product= "Human indole compound-related beta-secretase  
 protein"

XX JP2004149429-A.

XX 27-MAY-2004.

XX 29-OCT-2002; 2002JP-00314580.

XX 29-OCT-2002; 2002JP-00314580.

XX (TAKE ) TAKEDA CHEM IND LTD.

XX WPI; 2004-405630/38.

XX P-PDB; ADP74535.

XX Novel indole compound useful for treating senile dementia, Alzheimer's  
 PT disease, Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis,  
 PT Parkinson's disease, neuropathy, senile dementia, amnesia or myopathy.

XX Example 119; SEQ ID NO 6; 67pp; Japanese.

XX The invention relates to a novel indole compound. The compound of the  
 CC invention demonstrates neuroprotective, nootropic and antiparkinsonian  
 CC activities and may be useful as a preventive or therapeutic agent of  
 CC myopathy, neuropathy, defects of memory e.g. senile dementia or amnesia,  
 CC mental illness and neurodegenerative disease, including Alzheimer's  
 CC disease, Creutzfeldt Jacob disease, amyotrophic lateral sclerosis or  
 CC Parkinson's disease. The peptide of the invention may be useful for  
 CC measuring the beta-secretase inhibitory activity of a test compound. The  
 CC current sequence is that of the human indole compound-related beta-  
 CC secretase cDNA of the invention.

XX Sequence 1527 BP; 317 A; 447 C; 438 G; 325 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADP74534 ..

Alignment segment 1/1: (-)

Quality:	32.00	Bscore:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAla  
 ..:::::::::::::::::::  
 179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT

37  
 147

Sequence name: rngp2ndb:ADH34044

Sequence documentation:

ID ADH34044 standard; cDNA; 1542 BP.

AC ADH34044;

DT 11-MAR-2004 (first entry)

DE Human cDNA for His-tagged BACE (Beta-secretase).

XX BACE-2; inhibitor; Alzheimer's disease;  
 KW neuroprotective; nootropic; amyloid precursor protein;  
 KW beta-amyloid peptide; cerebrovascular amyloidosis; ss; gene.

XX Synthetic.

XX Homo sapiens.

XX US2003125257-A1.

XX 03-JUL-2003.

XX 18-DEC-2002; 2002US-00322684.

XX 20-DEC-2001; 2001EP-00130282.

XX (BROC/) BROCKHAUS M.

XX (DOEB/) DOEBELI H.

XX (GRUE/) GRUENINGER F.

XX (HUGU/) HUGUENIN P.

XX (KITA/) KITAS E A.

XX (NELB/) NELBOECK-HOCHSTETTER P.

XX Brockhaus M, Doebeli H, Grueninger F, Huguenin P, Kitas EA,  
 PI Nelboeck-Hochstetter P;  
 XX WPI; 2004-088811/09.

XX New inhibitors of beta-secretase, useful for treating cerebrovascular  
 PT amyloidosis, especially Alzheimer's disease, and for drug screening.

XX Example 1; SEQ ID NO 1; 23pp; English.

XX The invention relates to peptide beta-secretase (bs) inhibitors of  
 CC genetic formula appearing as ADH34057. Also included are an assay for  
 CC identifying inhibitors of bs, screening compounds for inhibition of bs  
 CC activity, a kit for identifying a bs inhibitor and bs inhibitors  
 CC identified using the kit. The bs used is isolated or recombinant, and  
 CC purified, especially a full-length bs, specifically BACE or BACE-2. The  
 CC inhibitors of beta-secretase (which is involved in degradation of amyloid  
 CC precursor protein to beta-amyloid peptide) are used for treating patients  
 CC with, or predisposed to, cerebrovascular amyloidosis, specifically  
 CC Alzheimer's disease. They are also used to prepare tagged derivatives,  
 CC useful in screening compounds for identifying other bs inhibitors and for  
 CC radiolabeling or positron emission tomographic imaging. The present  
 CC sequence encodes a His-tagged BACE protein used to produce BACE  
 CC protein recombinantly.

XX Sequence 1542 BP; 322 A; 459 C; 433 G; 328 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADH34044 ..

Alignment segment 1/1: (-)

Quality:	32.00	Bscore:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment: Gaps: 0

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|:::|  
194 AACGTGCCCCCTCCGCGCGGCTCCTCCGCGCTCT

37  
162

Sequence name: rngp2ndb:AAA15663

Sequence documentation:

ID AAA15663 standard; cDNA; 1977 BP.

AC AAA15663;

DT 03-AUG-2000 (first entry)

DE Human aspartyl protease 2 (b) (Asp2) nucleotide sequence.

DE Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;

KM Alzheimer's disease; beta secretase site; ss.

XX Homo sapiens.

OS WO200017369-A2.

PN 30-MAR-2000.

PD 23-SEP-1999; 99WO-US020881.

PF 24-SEP-1998; 98US-0101594P.

PR (PHAA) PHARMACIA & UPJOHN CO.

PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;

DR WPI; 2000-303209/26.

XX P-PSDB; AA08426.

PT New enzyme designated human aspartase useful in research into Alzheimer's  
PT Disease is capable of cleaving amyloid protein precursor at the beta  
PT secretase site to produce amyloid beta peptide.

PS Claim 8; Fig 3; 183pp; English.

CC This sequence represents the human aspartyl protease 2 (Asp2) nucleotide  
CC sequence. The invention relates to a protease (e.g. Asp2) capable of  
CC cleaving the beta secretase site of amyloid precursor protein (APP). The  
CC protease contains a sequence encoding the amino acid sequence DTG and a  
CC sequence encoding DSG or DTG separated by 100-300 amino acids. When  
CC mutated the APP gene causes an autosomal dominant form of Alzheimer's  
CC disease. APP localises to the cell surface membrane and have a single C-  
CC terminal transmembrane domain. Proteolytic processing of APP produces the  
CC amyloid beta protein, which is possibly very important in Alzheimer's  
CC disease. The invention includes a nucleotide sequence encoding the  
CC protease, a vector containing the nucleotide sequence, and a cell line  
CC comprising the vector. Methods for screening for inhibitors of beta  
CC secretase activity are also given in the invention. The human aspartase  
CC protein and nucleotide sequences and the methods for identifying  
CC inhibitors of the protease, are useful in the treatment of and research  
CC in to Alzheimer's disease

XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;

Alignment of: ua-10-726-967a-1 x AAA15663 ..

Alignment segment 1/1: (-)

Matching length: 32.00 Score: 264  
Matching Percent Similarity: 81.82 Total length: 11  
Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
:::|||||:::|:::|  
179 AACGTGCCCCCTCCGCGCGGCTCCTCCGCGCTCT

37  
147

Sequence name: rngp2ndb:AAS11703

Sequence documentation:

ID AAS11703 standard; DNA; 1977 BP.

AC AAS11703;

DT 24-OCT-2001 (first entry)

DE DNA encoding human aspartyl protease 2b (Asp-2b).

DE Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;

KM aspartyl protease 2; Asp2; amyloid protein precursor; APP;

KM beta-secretase; Alzheimer's disease; ds.

XX Homo sapiens.

OS

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XX

PS Claim 98; Fig 2; 185pp; English.  
XX The invention relates to a novel purified polypeptide comprising a  
XX fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
XX Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
XX and the fragment retain the beta-secretase activity of the mammalian Asp2  
XX protein. Also included is an isoform of amyloid protein precursor (APP)  
XX comprising the amino acid sequence of a APP or its fragment containing an  
XX APP cleavage site recognizable by a mammalian beta-secretase, and further



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FT      /tag= C
FT      /product= "Mature human aspartyl protease 2b (Hu-Asp2b) "
XX
XX      WO200150829-A2.
XX
XX      19-JUL-2001.
XX
XX      09-MAY-2001; 2001WO-IB000799.
XX
XX      09-MAY-2001; 2001WO-IB000799.
XX
XX      (BIEN/) BIENKOWSKI M J.
XX      (GURNEY) GURNEY M E.
XX      (HEINR) HEINRIKSON R L.
XX      (PARO/) PARODI L A.
XX      (YANR/) YAN R.
XX
XX      Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX
XX      WPI: 2001-483072/52.
XX      P-PSDB; AAE06860.
XX
XX      Novel purified polypeptide comprising fragment of mammalian aspartyl
XX      protease 2, lacking Asp2 transmembrane domain and retaining beta
XX      secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX      activity.
XX
XX      Claim 98; Fig 3, 185pp; English.
XX
XX      The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX      precursor protein (APP) isoforms and their corresponding DNA molecules.
XX      Human aspartyl proteases can act as beta-secretase proteases useful for
XX      treating Alzheimer's disease. APP isoforms are useful for identifying
XX      modulators of amyloid-beta peptide production, for use in designing
XX      therapeutics for the treatment and prevention of Alzheimer's disease,
XX      dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX      and neuronal loss. APP isoforms are also used in methods for identifying
XX      inhibitors and modulators of human Asp2 activity. The invention relates
XX      to a method for identifying agents that modulate the activity of human
XX      aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX      as a means to screen in cellular assays for the inhibitors of beta- and
XX      gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX      polymerase chain reactions (PCR). The probes are useful for detecting Hu-
XX      Asp nucleic acids in in vitro assays and in Northern and Southern blots.
XX      The present cDNA sequence encodes human aspartyl protease 2 (Hu-Asp2), a
XX      'short' form designated as (Hu-Asp2b). Hu-Asp 2 gene is localised on
XX      chromosome 11q23.3-24.1
XX
XX      Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;
XX
XX      Alignment of: us-10-726-967a-1 x AAD13022 ..
XX
XX      Alignment segment 1/1: (-)
XX
XX      Quality: 32.00      Score: 264
XX      Matching Percent: 81.82      Total length: 11
XX      Total Similarity: 81.82      Matching Percent Identity: 54.55
XX      Total Percent Identity: 54.55
XX      Gaps: 0
XX
XX      Alignment:
XX
XX      27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
XX      ::::|||||:|||||:|||||:|||||:|||||:
XX      179 AAGCTGCCCCCTCCGCGCGGCTCTCCGCGCTCT
XX
XX      Sequence name: rngp2ndb:AAD06740
XX
XX      Sequence documentation:
XX      ID AAD06740 standard; cDNA; 1977 BP.
XX
XX      AAD06740;
XX

```

```

DT      10-AUG-2001 (first entry)
XX
XX      Human aspartyl protease 2b (Asp2b) cDNA.
XX
XX      Human; alpha-secretase; amyloid precursor protein; APP; therapy;
XX      Alzheimer's disease; antialzheimer's; aspartyl protease 2b; Asp 2b;
XX      beta-secretase; chromosome 11q23.3-24.1; ss.
XX
XX      Homo sapiens.
XX
XX      Key      Location/Qualifiers
XX      CDS      1..1431
XX              /tag= a
XX              /product= "Human aspartyl protease 2b"
XX
XX      sig_peptide      1..63
XX              /tag= b
XX
XX      sig_peptide      64..135
XX              /tag= c
XX              /note= "Pre-pro-peptide"
XX
XX      sig_peptide      136..171
XX              /tag= d
XX              /note= "Pro-peptide"
XX
XX      mat_peptide      172..1428
XX              /tag= e
XX              /product= "Human mature aspartyl protease 2b"
XX
XX      WO200123533-A2.
XX
XX      05-APR-2001.
XX
XX      22-SEP-2000; 2000WO-US026080.
XX
XX      23-SRP-1999; 99US-0155493P.
XX      23-SRP-1999; 99WO-US020881.
XX      13-OCT-1999; 99US-00416901.
XX      06-DEC-1999; 99US-0169232P.
XX
XX      (PHMA ) PHARMACIA & UPJOHN CO.
XX
XX      Gurney M, Bienkowski MJ;
XX
XX      WPI: 2001-290516/30.
XX      P-PSDB; AAE02582.
XX
XX      Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX      protein, useful for the treatment of Alzheimer's disease.
XX
XX      Example 2; Page 129; 189pp; English.
XX
XX      The present invention relates to enzymes for cleaving the alpha-
XX      secretase site of the amyloid precursor protein (APP) and methods of
XX      identifying those enzymes. The methods may be used to identify enzymes
XX      that may be used to cleave the alpha-secretase cleavage site of the APP
XX      protein. The enzymes may be used to treat or modulate the progress of
XX      Alzheimer's disease. The present sequence is human aspartyl protease
XX      (Asp) 2b cDNA. Asp 2b has beta-secretase protease activity. Asp2 gene is
XX      located on chromosome 11q23.3-24.1
XX
XX      Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;
XX
XX      Alignment of: us-10-726-967a-1 x AAD06740 ..
XX
XX      Alignment segment 1/1: (-)
XX
XX      Quality: 32.00      Score: 264
XX      Matching Length: 11      Total length: 11
XX      Matching Percent: 81.82      Matching Percent Identity: 54.55
XX      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
XX      Gaps: 0
XX
XX      Alignment:
XX
XX      27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
XX

```

```

:::|||||:::
179 AAGCTGCCCTCCGCGCGGCTCCTCCGCGCTCT

```

147

Sequence name: rng2ndb:AA511518

Sequence documentation:

ID AA511518 standard; cDNA; 1977 BP.

AA511518;

24-OCT-2001 (first entry)

Human cDNA encoding Aspartyl protease 2 (b), Asp2 (b).

Human: Aspartyl protease; Asp2 (b); beta-secretase; neurotropic;

neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;

amyloid-beta; Abeta; ss.

Homo sapiens.

Key

CDS

sig\_peptide

sig\_peptide

sig\_peptide

mat\_peptide

mat\_peptide

mat\_peptide

mat\_peptide

mat\_peptide

mat\_peptide

mat\_peptide

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mat\_peptide

mat\_peptide

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CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
 CC useful for treating Alzheimer's disease. APP is useful in methods for  
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-  
 CC beta (Abeta) peptide production. APP is also useful in designing  
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP  
 CC comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is  
 CC associated with increased levels of Abeta processing is useful in assays  
 CC relating the Alzheimer's research. The expression vector is useful for  
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp  
 CC oligonucleotides are useful as probes or primers. The probes are useful  
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and  
 CC Southern blots. The present sequence encodes human Asp2 (b)

Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AA511518 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||:::
179 AAGCTGCCCTCCGCGCGGCTCCTCCGCGCTCT      147

```

Sequence name: rng2ndb:ABL49915

Sequence documentation:

ID ABL49915 standard; DNA; 1977 BP.

ABL49915;

31-MAY-2002 (first entry)

Human aspartyl protease nucleotide sequence SEQ ID NO:3.

Beta-secretase; enzyme; cleavage site; amyloid protein precursor; APP;

aspartyl protease; neuroprotective; neurotropic; beta-secretase inhibitor;

Alzheimer's disease; gene; ds.

Homo sapiens.

WO200206306-A2.

24-JUN-2002.

19-JUL-2001; 2001WO-US023035.

19-JUL-2000; 2000US-0219795P.

12-MAR-2001; 2001US-0275251P.

(PHAA) PHARMACIA &amp; UPJOHN CO.

Yan R, Tomasselli AG, Gurney ME, Emmons TL, Bienkowski MJ;

Heinrikson RL;

WPI; 2002-216995/27.

P-PSDB; ABB06410.

Novel substrates for human aspartyl protease useful for identifying

modulators of beta secretase activity of aspartyl protease for treating

Alzheimer's disease.

Claim 1; Page 119-120; 188pp; English.

The present invention describes an isolated peptide (1) comprising a  
 sequence of at least four amino acids, where the peptide is a substrate

CC for conducting aspartyl protease assays. (1) has neuroprotective and  
 CC nootropic activities, and can be used as an inhibitor of beta-secretase  
 CC activity. A beta-secretase modulator from the present invention can be  
 CC used for inhibiting beta-secretase activity in vivo, and in the  
 CC manufacture of a medicament for the treatment of Alzheimer's disease.  
 CC pharmaceutical compositions from the present invention can be used for  
 CC treating a disease or condition characterised by an abnormal beta-  
 CC secretase activity. (1) is useful for identifying agents that modulate  
 CC the activity of human Asp2 aspartyl protease (Hu-Asp2). (1) is useful as  
 CC a core structure to construct derivatives. ABL4914 to ABL4925 and  
 CC ABB06409 to ABB06593 represent sequences used in the exemplification of  
 CC the present invention

XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL49915 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyVala      37
:::|||||::|::|::|::|::|::|::|::|::|::|  147
179 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCTCT

```

Sequence name: trnp2ndb:ABL52458

Sequence documentation:

ID ABL52458 standard; cDNA; 1977 BP.

XX ABL52458;

XX 16-JUL-2002 (first entry)

XX Human Asp-2(b) nucleotide sequence SEQ ID NO:5.

XX Human; Asp-1; Asp-2; aspartyl protease; enzyme; Alzheimer's disease;

KW proteolytic; chromosome 11q23.3-24.1; gene; ss.

XX Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1431

FT /tag= a

FT /product= "Asp-2(b)"

FT /note= "aspartyl protease"

XX GB2367060-A.

XX 27-MAR-2002.

XX 29-OCT-2001; 2001GB-00025934.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99US-00416801.

XX 13-OCT-1999; 99US-00416801.

XX 06-DEC-1999; 99US-0169232P.

XX 22-SEP-2000; 2000GB-00023315.

XX (PHAA) PHARMACIA & UPJOHN CO.

XX Blenkoweki MJ, Gurney M;

XX MPI; 2002-397167/43.

XX P-P5DB; ABB78591.

XX

PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.

XX Example 2; Fig 3; 182pp; English.

XX The present invention describes a human aspartyl protease 1 (hu-Asp1)  
 CC substrate (1) which comprises a peptide of no more than 50 amino acids,  
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
 CC Glu-Pro. Also described are: (1) a method (11) for assaying hu-Asp1  
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1  
 CC proteolytic activity; (2) a purified polynucleotide (111) comprising a  
 CC nucleotide sequence that hybridises under stringent conditions to the non  
 CC coding strand complementary to a defined 1804 nucleotide sequence (see  
 CC ABL52456) where the nucleotide sequence encodes a polypeptide having Asp1  
 CC proteolytic activity and lacks nucleotides encoding a transmembrane  
 CC domain; (3) a purified polynucleotide (111') comprising a sequence that  
 CC hybridises under stringent conditions to (111) (the nucleotide sequence  
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding  
 CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (1V)  
 CC comprising (111) or (111') and (5) a host cell (1V) transformed or  
 CC transfected with (111), (111') and/or (1V). The hu-Asp1 protease  
 CC substrate (1) may be used as an enzyme substrate in assays to detect  
 CC aspartyl protease activity, (11) and therefore diagnose diseases  
 CC associated with aberrant hu-Asp1 expression and activity such as  
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
 CC sequence encodes hu-Asp2(b) from the present invention

XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL52458 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyVala      37
:::|||||::|::|::|::|::|::|::|::|::|::|  147
179 AAGCTGCCCTCCGCGCGGCTCCTCGGCTCTCT

```

Sequence name: trnp2ndb:ADJ94317

Sequence documentation:

ID ADJ94317 standard; cDNA; 1977 BP.

XX ADJ94317;

XX 03-JUN-2004 (first entry)

XX Human cDNA encoding aspartyl protease 2b, Asp-2b.

XX Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

KW beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

KW nootropic; neuroprotective; amyloid beta.

XX Homo sapiens.

XX US6706485-B1.

XX 16-MAR-2004.

XX 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX

PR	23-SEP-1999;	99WO-US020881..	
PR	13-OCT-1999;	99US-00416901.	
PA	(PHAA )	PHARMACIA & UPJOHN CO.	
PI	Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;		
DR	WPI, 2004-236722/22.		
XX	P-PsDB; ABD94318.		
PT	Identifying agents that modulate activity of Asp2 aspartyl protease		
PT	useful for treating or preventing Alzheimer's disease involves comparing		
PT	App processing activity of protease in presence and absence of test		
XX	agent.		
PS	Claim 1; SEQ ID NO 5; 109pp; English.		
XX			
CC	The invention relates to identifying agents that modulate activity of		
CC	Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,		
CC	encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid		
CC	precursor protein (APP) in the presence and absence of a test agent,		
CC	where Asp2 is a recombinant polypeptide and processes APP into amyloid		
CC	beta, determining APP processing activity of Asp2 in presence and absence		
CC	of the test agent, and comparing the activities to identify agents that		
CC	modulate the activity of Asp2. Also disclosed are the cDNA and proteins		
CC	for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the		
CC	nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising		
CC	the vector and the method of producing Hu-Asp polypeptide, an isolated		
CC	antibody that specifically binds to Hu-Asp polypeptides, identifying a		
CC	cell that can be used to screen for inhibitors of beta secretase		
CC	activity, novel isoforms of amyloid protein precursor (APP), where the		
CC	last 2 carboxy terminus amino acids of that isoform are both lysine		
CC	residues (e.g. those designated APP695-KK or carrying the Swedish		
CC	mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw		
CC	or APP695-Sw-KK, or a V to F mutation at 642; e.g. APP695-VF, all useful		
CC	for assaying for beta secretase activity and screening for inhibitors of		
CC	beta-secretase) and polynucleotides that encode the APP proteins. The		
CC	method is useful for identifying agents that modulate the activity		
CC	(amyloid precursor protein processing activity) of Asp2 aspartyl		
CC	protease. Preferably, the method is useful for identifying agents that		
CC	inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid		
CC	precursor protein processing, are useful for treating or preventing		
CC	Alzheimer's disease. The present sequence encodes an aspartyl protease of		
CC	the invention.		
XX			
XX	Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;		
SO			
Alignment of: us-10-726-967a-1 x ABD94317 ..			
Alignment segment 1/1: (-)			
	Quality: 32.00	EScore: 264	
	Matching length: 11	Total length: 11	
	Matching Percent Similarity: 81.82	Matching Percent Identity: 54.55	
	Total Percent Similarity: 81.82	Total Percent Identity: 54.55	
	Gaps: 0		
Alignment:			
27 ArgLeuProLeuArgSerGlyLeuGlyAla	37		
:::     :::     :::     :::			
179 AAGCTGCCCCCTCCGCGCCGGGCTCTCTCGGGCGCTCT	147		
Sequence name: mnp2ndb:AD050413			
Sequence documentation:			
ID AD050413 standard; cDNA; 1977 BP.			
AC ADO50413;			
XX			
DT 29-JUL-2004 (first entry)			
XX			
DE Human aspartyl protease (Asp-2(b))cDNA.			

```

XX Asparyl protease; Asp, beta secretase; amyloid precursor protein; APP;
KW Alzheimer's disease; gene therapy; human; gene; chromosome 11q23.3-24.1;
KM ss...
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
FH CDS 1..1431
FT FT /*tag= b
FT FT /product= "Human Asp-2 protein"
FT sig_peptide 1..63
FT mat_peptide /*tag= a
FT /*tag= 64..1428
FT /*tag= c
FT /product= "Human mature Asp-2 protein"
XX
XX US6737510-B1.
PD 19-MAY-2004.
XX
XX 12-APR-2000; 2000US-00548373.
XX
XX 24-SEP-1999; 98US-0101594P.
PR 23-SEP-1999; 99US-00404133.
PR 23-SEP-1999; 99US-0155493P.
PR 23-SEP-1999; 99WO-US020881.
PR 13-OCT-1999; 99US-00416901.
XX
XX (PHMA ) PHARMACIA & UPJOHN CO.
PA
XX Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R,
PI MPI; 2004-387112/36.
XX DR P-PSTDB; ADO50414.
XX
XX New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
PT involved in processing amyloid precursor protein into amyloid beta,
PT useful in preparing a composition for treating or preventing Alzheimer's
PT disease.
XX
XX Claim 1; SEQ ID NO 5; 108pp; English.
PS
XX The invention relates to a method for identifying an agent that decreases
CC the protease activity of the aspartyl protease (Asp) polypeptide. It also
CC provides enzyme and enzymatic procedures for cleaving the beta secretase
CC cleavage site of the amyloid precursor protein (APP). The invention is
CC useful in preparing a composition for treating or preventing Alzheimer's
CC disease. It is also useful in gene therapy. The present sequence is human
CC Asp-2 CDNA. Human Asp-2 gene is located at chromosome 11q23.3-24.1. This
CC sequence is used to illustrate the method of the invention.
XX
XX Sequence 1977 BP; 447 A; 552 C; 551 G; 427 T; 0 U; 0 Other;
Alignment of: us-10-726-967a-1 x ADO50413 ..
Alignment segment 1/1: (-)
Quality: 32.00
Matching Length: 11
Total Length: 264
Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55
Total Percent Similarity: 81.82 Total Percent Identity: 54.55
Gaps: 0
Alignment:
27 ArgLeuProLeuArgSerGlyLeuGlyAla 37
:::|||||:::|:::|:::|
179 AAGCTCCTCCCTCGGCCGGACTCTCGGGCTCT 147
Sequence name: rmgp2ndb.ADR75326
Sequence documentation:

```





Matching Percent Similarity: 81.82 Matching Percent Identity: 54.55  
 Total Percent Similarity: 81.82 Total Percent Identity: 54.55  
 Gaps: 0

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
 :::::::::::::::::::::  
 179 AAGTCGCCCTCCGCGCGGCTCTCCGAGCTCT 147

Sequence name: rngp2ndb: AAS11702

## Sequence documentation:

ID AAS11702 standard; DNA; 2070 BP.  
 AC AAS11702;  
 XX  
 DT 24-OCT-2001 (first entry)  
 XX  
 DE DNA encoding human aspartyl protease 2a (Asp-2a).  
 XX  
 KW Human; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;  
 KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;  
 KW beta-secretase; Alzheimer's disease; ds.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT CDS 1..1506  
 FT /\*tag= a  
 FT /product= "Aspartyl protease-2a (Asp-2a)"  
 FT sig\_peptide 1..63  
 FT /\*tag= b  
 FT misc\_feature 64..135  
 FT /\*tag= c  
 FT /note= "Pre-propeptide"  
 FT misc\_feature 136..171  
 FT /\*tag= d  
 FT /note= "Propeptide"  
 FT mat\_peptide 172..1503  
 FT /\*tag= e  
 FT /note= "Mature Aspartyl protease-2a"  
 XX  
 PN WO200149097-A2.  
 XX  
 PD 12-JUL-2001.  
 XX  
 PF 09-MAY-2001; 2001WO-IB000797.  
 XX  
 PR 09-MAY-2001; 2001WO-IB000797.  
 XX  
 PA (BIEN/) BIENKOWSKI M J.  
 PA (GURN/) GURNEY M E.  
 PA (HEIN/) HEINRIKSON R L.  
 PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.  
 XX  
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 XX  
 DR P-PSDB; AAU07102.  
 DR  
 XX  
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.  
 XX  
 PS Claim 98; Fig 2; 185pp; English.  
 XX  
 CC The invention relates to a novel purified polypeptide comprising a  
 CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2

CC protein. Also included is an isoform of amyloid protein precursor (APP)  
 CC comprising the amino acid sequence of a APP or its fragment containing an  
 CC APP cleavage site recognizable by a mammalian beta-secretase, and further  
 CC comprising two lysine residues at the carboxyl terminus of the amino acid  
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used  
 CC for assaying for modulators of beta-secretase activity; identifying  
 CC agents that inhibit the APP processing activity of human Asp2 aspartyl  
 CC protease (hu-Asp2); identifying agents that modulate the activity of Asp2  
 CC ; and for reducing cellular production of amyloid beta (Abeta) from APP.  
 CC Agents identified by the above methods are useful for treating  
 CC Alzheimer's disease; and for identifying modulators of amyloid-beta  
 CC (Abeta) peptide production, for use in designing therapeutics for the  
 CC treatment or prevention of Alzheimer's disease. Probes and primers  
 CC derived from APP nucleic acid sequences are useful for detecting hu-APP  
 CC nucleic acids in vitro assays and in Northern and Southern blots. The  
 CC present sequence represents the coding sequence of human Asp-2a used in  
 CC the methods of the invention  
 XX

SO Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS11702 ..

Alignment segment 1/1: (-)

Matching length:	Quality:	Score:
11	32.00	264
81.82	11	11
Total Percent Similarity: 81.82	Total Percent Identity: 54.55	
Gaps: 0		

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
 :::::::::::::::::::::  
 179 AAGTCGCCCTCCGCGCGGCTCTCCGAGCTCT 147

Sequence name: rngp2ndb: AAD17865

## Sequence documentation:

ID AAD17865 standard; cDNA; 2070 BP.  
 XX  
 AC AAD17865;  
 XX  
 DT 10-DEC-2001 (first entry)  
 XX  
 DE Human aspartyl protease 2(a) [hu-Asp2(a)] cDNA.  
 XX  
 KW Human; aspartyl protease 2(a); Asp2(a); amyloid precursor protein; APP;  
 KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;  
 KW amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;  
 KW chromosome 11q23.3-24.1; ss.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT CDS 1..1506  
 FT /\*tag= a  
 FT /product= "Human aspartyl protease 2(a)"  
 FT sig\_peptide 1..63  
 FT /\*tag= b  
 FT mat\_peptide 64..1503  
 FT /\*tag= c  
 FT /product= "Mature human aspartyl protease 2(a)"  
 XX  
 PN GB2357767-A.  
 XX  
 PD 04-JUL-2001.  
 XX  
 PF 22-SEP-2000; 2000GB-00023315.  
 XX  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99MO-US020881.

	PS	Example 2, Fig 2, 187pp; English.
	XX	The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
	CC	proteins which lack transmembrane domain or amino terminal domain or
	CC	cycloplasmic domain and retains alpha-secretase activity and amyloid
	CC	invention are useful for assaying hu-Asp1 alpha-secretase activity, which
	CC	in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
	CC	activity, where modulators that increase hu-Asp1 alpha-secretase activity
	CC	are useful for treating Alzheimer's disease (AD) which causes progressive
	CC	dementia with consequent formation of amyloid plaques, neurofibrillary
	CC	tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
	CC	for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
	CC	with the substrate under acidic conditions and determining the level of
	CC	hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding
	CC	long form of human Asp2 protein, designated as Asp2(a). Asp2 gene is
	CC	located on chromosome 11q23.3-24.1
SQ	XX	Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;
		Alignment of: us-10-726-967a-1 x AAD17865 ..
		Alignment segment 1/1: (-)
		Matching length: 32.00      Total length: 264
		Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
		Total Percent Similarity: 81.82      Total Percent Identity: 54.55
		Gaps: 0
Alignment:		
	27	ArgLeuProLeuArGSeRgLyLeuGIyGIyAlA                          37
	:::	:::    :
	179	AACGTGCCCTCGCGGGCTCCTCGGCTCTCT                          147
Sequence name:	trsp2ndb:AAD13021	
Sequence documentation:		
ID	AAD13021	standard; cDNA; 2070 BP.
XX	AAD13021;	
DT	23-OCT-2001	(first entry)
DE	Human aspartyl protease 2a (Hu-Asp2a)	cDNA.
XX		
KW	Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;	
KW	beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;	
KW	neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;	
KW	neuroprotective; antisense therapy; gene therapy;	
KM	chromosome 11q23.3-24.1; ss.	
OS	Homo sapiens.	
XX		
FH	Key	Location/Qualifiers
FT	CDS	1..1506
FT	/tag= a	
FT	/product= "Human aspartyl protease 2a (Hu-Asp2a)"	

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FT      sig_peptide      1..63
FT      mat_peptide      64..1503
FT      /tag= b
FT      /tag= c
FT      /product= "Mature human aspartyl protease 2a (Hu-Asp2a) "
PN      WO200150829-A2.
XX      PD
XX      19-JUL-2001.
XX      PF
XX      09-MAY-2001; 2001WO-IB000799.
XX      PR
XX      09-MAY-2001; 2001WO-IB000799.
XX      PA
XX      (BIEN/) BIENKOWSKI M J.
XX      (GURNEY/) GURNEY M E.
XX      (HEIN/) HEINRIKSON R L.
XX      (PARODI/) PARODI L A.
XX      (YANR/) YAN R.
XX      PI
XX      Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX      WPI; 2001-483072/52.
XX      DR
XX      P-PSDB; AA06739.
XX      PT
XX      Novel purified polypeptide comprising fragment of mammalian aspartyl
XX      protease 2, lacking Asp2 transmembrane domain and retaining beta
XX      secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX      activity.
XX      PS
XX      Claim 98; Fig 2; 185pp: English.
XX      CC
XX      The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid
XX      precursor protein (APP) isoforms and their corresponding DNA molecules.
XX      Human aspartyl proteases can act as beta-secretase proteases useful for
XX      treating Alzheimer's disease. APP isoforms are useful for identifying
XX      modulators of amyloid-beta peptide production, for use in designing
XX      therapeutics for the treatment and prevention of Alzheimer's disease,
XX      dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis
XX      and neuronal loss. APP isoforms are also used in methods for identifying
XX      inhibitors and modulators of human Asp2 activity. The invention relates
XX      to a method for identifying agents that modulate the activity of human
XX      aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used
XX      as a means to screen in cellular assays for the inhibitors of human
XX      gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in
XX      polymerase chain reactions (PCR). The probes are useful for detecting Hu
XX      Asp nucleic acids in in vitro assays and in Northern and Southern blots.
XX      The present cDNA sequence encodes human aspartyl protease 2 (Hu-Asp2), a
XX      'long' form designated as (Hu-Asp2a). Hu-Asp 2 gene is localised on
XX      chromosome 11q23.3-24.1
XX      CC
XX      Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;
XX      SQ
XX      Alignment of: us-10-726-967a-1 x AAD13021 ..
XX      Alignment segment 1/1: (-)
XX      Quality: 32.00
XX      Matching Length: 11
XX      Matching Percent Similarity: 81.82
XX      Matching Percent Identity: 54.55
XX      Total Percent Similarity: 81.82
XX      Total Percent Identity: 54.55
XX      Gaps: 0
XX      Alignment:
XX      27 ArgLeuPProLeuArgSerGlyLeuGlyGlyAla 37
XX      ::::|||||:::|||||: 147
XX      179 AAGGTGCGCCCTCCGCGCGGCGCTCTCCGCGCTCT
Sequence name: rnp2ndb:AAD06739
Sequence documentation:
ID AAD06739 standard; cDNA, 2070 BP

```

XX	AA006739;
XX	
DT	10-AUG-2001 (first entry)
XX	
DE	Human aspartyl protease 2a (Asp2a) cDNA.
XX	
KW	Human; alpha-secretase; amyloid precursor protein; APP; therapy;
KM	Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp 2a;
KX	beta-secretase; chromosome 11q23.3-24.1; ss.
OS	
XX	Homo sapiens.
FH	
FT	Key
FT	CDS
FT	Location/Qualifiers
FT	1..1506
FT	/tag= a
FT	/product= "Human aspartyl protease 2a"
FT	1..63
FT	/tag= b
FT	64..135
FT	/tag= c
FT	/note= "Pre-pro-peptide"
FT	136..171
FT	/tag= d
FT	/note= "Pro-peptide"
FT	172..1503
FT	/tag= e
FT	/product= "Human mature aspartyl protease 2a"
XX	
XX	WO200123533-A2.
XX	
XX	05-APR-2001.
PP	
PE	22-SEP-2000; 2000MO-USO26080.
XX	
PR	23-SEP-1999; 99US-0155493P.
PR	23-SEP-1999; 99WO-USO20881.
PR	13-OCT-1999; 99US-00416901.
PR	06-DEC-1999; 99US-0169232P.
XX	
PA	(PHUA ) PHARMACIA & UPJOHN CO.
PI	
PT	Gurney M, Bienkowiak MJ;
XX	
DR	WPI; 2001-290516/30.
DR	P-PSDB; AAE02581.
XX	
PT	Enzymes that cleave the alpha-secretase site of the amyloid precursor
XX	protein, useful for the treatment of Alzheimer's disease.
XX	
XX	Example 2; Page 126-127; 189pp; English.
CC	The present invention relates to enzymes for cleaving the alpha-
CC	secretase site of the amyloid precursor protein (APP) and methods of
CC	identifying those enzymes. The methods may be used to identify enzymes
CC	that may be used to cleave the alpha-secretase cleavage site of the APP
CC	protein. The enzymes may be used to treat or modulate the progress of
CC	Alzheimer's disease. The present sequence is human aspartyl protease
CC	(Aap) 2a cDNA. Asp 2a has beta-secretase protease activity. Asp2 gene is
CC	located on chromosome 11q23.3-24.1
XQ	Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;

Alignment segment 1/1: (-)

Quality:	32.00	EScore:	267
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

**Alignment:**

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37  
:::|||||:::|:::|:::  
179 AAGCTGCCCCCTCCGCGCGGCTCCTCGGCTCT 147

Sequence name: rnrp2ndb:AAS11517

Sequence documentation:

AC AAS11517;

DT 24-OCT-2001 (first entry)

DE Human cDNA encoding Aspartyl protease 2(a), Asp2(a)

KW Human; Aspartyl protease; Asp2(a); beta-secretase; nootropic;  
KW neuroprotective; amyloid precursor; APP; Alzheimer's disease.

KW amyloid-beta; Abeta; ss.  
XY

OS Homo sapiens  
XY

EH	Key	Location/Qualifiers
FT	CDS	1 1506

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/*tag= a
/product= "Aan2(a)"
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FT      sig_peptide      1. : 63
FT      /*tag= p

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Pro peptide  
/label=

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...tag= e
FT

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XX:

XX

XX

XX

XXX

PA (GURN/) GURNEY M E.

PA (PARO/) PARODI L A.

XX

XX

DR P-PSDB; AAU06603.

PT Novel purified polypeptide comprising fragment of mammalian aspartyl

PT secretase activity of Asp2 useful for identifying inhibitors of Asp2

XX

XX

The invention relates to a purified polypeptide comprising a fragment of mammalian aspartyl protease (Asp)<sup>2</sup> protein which lacks the Asp<sup>2</sup> transmembrane domain and the Asp<sup>2</sup> protease, and where the polypeptide and the fragment retain the beta-secretase activity of the mammalian Asp<sup>2</sup> protein. The invention also details polynucleotides for the Asp proteins and vectors expressing them, and a polypeptide (isoform of amyloid protein precursor (APP)) comprising the amino acid sequence of an APP or its fragment containing an APP cleavage site recognizable by a mammalian



DR WPI: 2002-397167/43.  
 DR P-PSDB; ABB78590.  
 XX  
 PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
 XX protease activity, e.g. for the diagnosis of Alzheimer's disease.  
 PS Example 2; Fig 2; 182pp; English.  
 CC The present invention describes a human aspartyl protease 1 (hu-Asp1)  
 CC substrate (1) which comprises a peptide of no more than 50 amino acids,  
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
 CC (1) under acidic conditions; and (b) determining the level of hu-Asp1  
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a  
 CC nucleotide sequence that hybridises under stringent conditions to the non  
 CC coding strand complementary to a defined 1804 nucleotide sequence (see  
 CC AB152456) where the nucleotide sequence encodes a polypeptide having Asp1  
 CC proteolytic activity and lacks nucleotides encoding a transmembrane  
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that  
 CC hybridises under stringent conditions to (III) (the nucleotide sequence  
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding  
 CC to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)  
 CC comprising (III) or (III') and (5) a host cell (V) transformed or  
 CC transfected with (III), (III'), and/or (IV). The hu-Asp1 protease  
 CC substrate (1) may be used as an enzyme substrate in assays to detect  
 CC aspartyl protease activity, (II) and therefore diagnose diseases  
 CC associated with aberrant hu-Asp1 expression and activity such as  
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
 CC sequence encodes hu-Asp2(a) from the present invention  
 XX  
 SQ Sequence 2070 BP; 476 A; 583 C; 562 G; 449 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ABL52457 ..  
 Alignment segment 1/1: (-)  

Matching length:	Quality:	Score:
11	32.00	264
81.82	11	11
81.82	Matching Percent Identity:	54.55
0	Total Percent Identity:	54.55

 Gaps: 0  
 Alignment:  
 27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
 :::::::::::::::::::::  
 179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147  
 Sequence name: rmgp2ndb:ADJ94315  
 Sequence documentation:  
 ID ADJ94315 standard; cDNA; 2070 BP.  
 XX  
 AC ADJ94315;  
 XX  
 DT 03-JUN-2004 (first entry)  
 XX  
 DE Human cDNA encoding aspartyl protease 2a, Asp-2a.  
 XX  
 KM Human; sg; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);  
 KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;  
 KM neurotrophic; neuroprotective; amyloid beta.  
 XX  
 OS Homo sapiens.  
 XX  
 PN US6706485-B1.  
 XX  
 PD 16-MAR-2004.  
 XX  
 PF 12-APR-2000; 2000US-00548376.  
 XX

PR 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155433P.  
 PR 23-SEP-1999; 99WO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 XX  
 PA (PHARMA) PHARMACIA & UPJOHN CO.  
 XX  
 PT Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
 XX WPI: 2004-236722/22.  
 DR P-PSDB; ADJ94316.  
 XX  
 PT Identifying agents that modulate activity of Asp2 aspartyl protease  
 PT useful for treating or preventing Alzheimer's disease involves comparing  
 PT APP processing activity of protease in presence and absence of test  
 XX agent.  
 PS Example 2; SEQ ID NO 3; 109pp; English.  
 CC The invention relates to identifying agents that modulate activity of  
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 CC precursor protein (APP) in the presence and absence of a test agent,  
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated  
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy terminal amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-Sw  
 CC or APP695-Sw-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the activity  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease. Preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease of  
 CC the invention.  
 XX  
 SQ Sequence 2070 BP; 476 A; 582 C; 563 G; 449 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ADJ94315 ..  
 Alignment segment 1/1: (-)  

Matching length:	Quality:	Score:
11	32.00	264
81.82	11	11
81.82	Matching Percent Identity:	54.55
0	Total Percent Identity:	54.55

 Gaps: 0  
 Alignment:  
 27 ArgLeuProLeuArgSerGlyLeuGlyAla 37  
 :::::::::::::::::::::  
 179 AAGCTGCCCTCCGCGCGGCTCTCGGCTCT 147  
 Sequence name: rmgp2ndb:ADJ94315  
 Sequence documentation:  
 ID ADJ94315 standard; cDNA; 2070 BP.  
 XX  
 AC ADJ94315;  
 XX

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TT      29-JUL-2004      (first entry)
XX
DE      Human aspartyl protease (Asp)-2(a) cDNA.
XX
XX      Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;
KM      Alzheimer's disease; gene therapy; human; gene; chromosome 11q23.3-24.1,
KW      ss.
XX
OS      Homo sapiens.
XX
XX      Key                      Location/Qualifiers
FH          CDS                  1..1506
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FT          /product= "Human Asp-2 protein"
FT          sig_peptide          1..63
FT          /tag= a
FT          mat_peptide          64..1503
FT          /tag= c
FT          /product= "Human mature Asp-2 protein"
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XX      US6737510-B1.
XX
XX      18-MAY-2004.
XX
XX      12-APR-2000; 2000US-00548372.
XX
XX      24-SEP-1998; 98US-0101594P.
PR      23-SEP-1999; 99US-00404133.
PR      23-SEP-1999; 99US-0155493P.
PR      23-SEP-1999; 99WO-US020881.
PR      13-OCT-1999; 99US-00416901.
XX
XX      (PHAA ) PHARMACIA & UPJOHN CO.
XX
XX      Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;
PI      MPI; 2004-387112/36.
DR      P-PSDB; ADO050412.
XX
XX      New Asp2 aspartyl protease protein comprising tripeptides DTG and DSG
PT      involved in processing amyloid precursor protein into amyloid beta,
PT      useful in preparing a composition for treating or preventing Alzheimer's
PT      disease.
XX
XX      Example 2; SEQ ID NO 3; 108pp; English.
XX
XX      The invention relates to a method for identifying an agent that decreases
CC      the protease activity of the aspartyl protease (Asp) polypeptide. It also
CC      provides enzyme and enzymatic procedures for cleaving the beta secretase
CC      cleavage site of the amyloid precursor protein (APP). The invention is
CC      useful in preparing a composition for treating or preventing Alzheimer's
CC      disease. It is also useful in gene therapy. The present sequence is human
CC      Asp-2 CDNA. Human Asp-2 gene is located at chromosome 11q23.3-24.1. This
CC      sequence is used to illustrate the method of the invention.
XX
XX      SQ
XX
XX      Alignment of: us-10-726-967a-1 x ADO50411 ..
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XX      Alignment segment 1/1: (-)
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XX      Quality:           32.00      Bscore:         264
XX      Matching length:   11         Total length:    11
XX      Matching Percent Similarity: 81.82      Matching Percent Identity: 54.55
XX      Total Percent Similarity: 81.82      Total Percent Identity: 54.55
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XX      Gaps:              0
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XX      27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla       37
XX      :::::::::::::::::::::
XX      179 AAGTGTGCCCTCCGGCGGGCTCTCCGGGCTCT       147

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Sequence name: ringp2ndb:ADR75324

Sequence documentation:  
ID ADR75324 standard; cDNA; 2070 BP.

AC ADR75324;  
AD 18-NOV-2004 (first entry)  
DE Human aspartyl protease (Asp)-2(a) CDNA.  
KW Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;  
KW chromosome identification; Alzheimer's disease; human; gene; ss.  
OS Homo sapiens.

Key	Location/Qualifiers
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FT sig_peptide	1..63
FT	/*tag= a
FT mat_peptide	64..1503
FT	/*tag= c
FT	/product= "Human mature Asp-2 protein"

PN US2004166507-A1.

PD 26-AUG-2004.

PF 29-AUG-2003; 2003US-00652045.

PR 24-SEP-1998; 98US-0101594P.  
PR 23-SEP-1999; 99US-00404133.  
PR 23-SEP-1999; 99US-0155493P.  
PR 13-OCT-1999; 99US-00416901.

XX (GURN/) GURNEY M E.  
PA (BIEN/) BIENKOWAKI M J.  
PA (HEIN/) HEINRIKSON R L.  
PA (PARO/) PARODI L A.  
PA (YANR/) YAN R.

PI Gurney ME, Bienkowiaki MJ, Heinrichson RL, Parodi LA, Yan R;  
DR WPI: 2004-624916/60.  
DR P-PSDB; ADR75325.

XX Novel purified/isolated polynucleotide encoding polypeptide having  
PT aspartyl protease activity involved in processing amyloid precursor  
PT protein into amyloid beta, useful in identifying agent decreasing  
PT activity of aspartyl protease.

XX Claim 1; SEQ ID NO 3; 107bp; English.

PS The invention relates to nucleic acid sequences encoding aspartyl  
CC protease (Asp) polypeptides having aspartyl protease activity involved in  
CC processing amyloid precursor protein (APP) into amyloid beta. The  
CC invention also relates to a method for identifying an agent that  
CC decreases the protease activity of the Asp. Asp DNA is useful in  
CC chromosome identification as they can hybridize with a specific location  
CC on a human chromosome and in identifying the relationship between genes  
CC and diseases (particular gene responsible for causing diseases). It is  
CC also useful for identifying gene candidates to modulate the progression of  
CC Alzheimer's disease. Asp is useful in raising antibodies that are useful  
CC in diagnostic assay for detecting hu-Asp polypeptide expression. The  
CC present sequence is the human Asp-2(a) CDNA. This sequence is used to  
CC illustrate the method of the invention.

XX Sequence 2070 BP; 476 A; 582 C; 563 G; 449 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADR75324 ..

## Alignment segment 1/1: (-)

Quality:	32.00	Total length:	264
Matching length:	11	Matching Percent Identity:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

## Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla  
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179 AAGCTGCCCCCTCCGGCCGGGCTCTCCGGGCTCT

Sequence name: rngp2nrb:AAV41696

Sequence documentation:  
ID AAV41696 standard; cDNA; 2541 BP.

XX AAV41696;

XX 26-OCT-1998 (first entry)

XX Nucleotide sequence of human ASP2 (aspartic protease 2).

XX Human, ASP2; aspartic protease 2; agonist; antagonist; immunospecific;  
XX antibody; inhibition; Alzheimer's disease; cancer; proteinase;  
XX prohormone processing; ss.

XX Homo sapiens.

Key	Location/Qualifiers
FT CDS	1..1506
	/*tag= a
	/product= "human ASP2"

XX EP855444-A2.

XX 29-JUL-1998.

XX 27-JAN-1998; 98BP-00300573.

XX 28-JAN-1997; 97GB-00001684.

XX (SMIK ) SMITHKLINE BEECHAM PLC.  
XX (SMIK ) SMITHKLINE BEECHAM CORP.

XX Powell DJ, Smith TS, Chapman CG, Murphy K;

XX WPI; 1998-389809/34.

XX P-PSDB; AAM59807.

XX New nucleic acid encoding human aspartic protease 2 - used to treat,  
XX prevent and diagnose e.g. Alzheimer's disease, cancer and prohormone  
XX processing.

XX Claim 2; Page 6-7; 26pp; English.

XX This is the nucleotide sequence of the human ASP2 (aspartic protease 2),  
XX used in the method of the invention. Agonists and antagonists for ASP2  
XX immunospecific antibodies are used to treat conditions requiring  
XX increased or decreased activity or expression of ASP2 respectively. ASP2  
XX is used to treat and diagnose e.g. Alzheimer's disease, cancer and  
XX prohormone processing and ASP2 or a fragment can be used to induce an  
XX immune response against the above conditions

XX Sequence 2541 BP; 598 A; 673 C; 675 G; 579 T; 0 U; 16 Other;

Alignment of: us-10-726-967a-1 x AAV41696 ..

Alignment segment 1/1: (-)

Quality: 32.00

Score: 264

Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

## Alignment:

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179 AAGCTGCCCCCTCCGGCCGGGCTCTCCGGGCTCT

Sequence name: rngp2nrb:AAS82237

Sequence documentation:  
ID AAS82237 standard; cDNA; 2907 BP.

XX AAS82237;

XX 13-FEB-2002 (first entry)

XX DNA encoding novel human diagnostic protein #18041.

XX Human; chromosome mapping; gene mapping; gene therapy; forensic;  
XX food supplement; medical imaging; diagnostic; genetic disorder; ss.

XX Homo sapiens.

XX WO200175067-A2.

XX 11-OCT-2001.

XX 30-MAR-2001; 2001NO-US008631.

XX 31-MAR-2000; 2000US-00540217.

XX 23-AUG-2000; 2000US-00649167.

XX (HYSE-) HYSEQ INC.

XX Dmanac RT, Liu C, Tang YT;

XX WPI; 2001-639362/73.

XX P-PSDB; ABG18050.

XX New isolated polynucleotide and encoded polypeptides, useful in  
XX diagnostics, forensics, gene mapping, identification of mutations  
XX responsible for genetic disorders or other traits and to assess  
XX biodiversity.

XX Claim 1; SEQ ID NO 18041; 103pp; English.

XX The invention relates to isolated polynucleotide (I) and polypeptide (II)  
XX sequences. (I) is useful as hybridisation probes, polymerase chain  
XX reaction (PCR) primers, oligomers, and for chromosome and gene mapping,  
XX and in recombinant production of (II). The polynucleotides are also used  
XX in diagnostics as expressed sequence tags for identifying expressed  
XX genes. (I) is useful in gene therapy techniques to restore normal  
XX activity of (II) or to treat disease states involving (II). (II) is  
XX useful for generating antibodies against it, detecting or quantitating a  
XX polypeptide in tissue, as molecular weight markers and as a food  
XX supplement. (II) and its binding partners are useful in medical imaging  
XX of sites expressing (II). (I) and (II) are useful for treating disorders  
XX involving aberrant protein expression or biological activity. The  
XX polypeptide and polynucleotide sequences have applications in  
XX diagnostics, forensics, gene mapping, identification of mutations  
XX responsible for genetic disorders or other traits to assess biodiversity  
XX and to produce other types of data and products dependent on DNA and  
XX amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic  
XX coding sequences of the invention. Note: The sequence data for this  
XX patent did not appear in the printed specification, but was obtained in  
XX electronic format directly from WIPO at  
XX ftp.wipo.int/pub/published\_pct\_sequences

XX Sequence 2907 BP; 623 A; 801 C; 811 G; 672 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAS62237 ..

Alignment segment 1/1: (+)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|:::|:::|
2729 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 2761
```

Sequence name: rngp2ndb:AAS73798

Sequence documentation:

ID AAS73798 standard; cDNA; 2914 BP.

XX AAS73798;

DT 13-FEB-2002 (first entry)

XX DNA encoding novel human diagnostic protein #9602.

XX Human: chromosome mapping; gene mapping; gene therapy; forensic;

XX food supplement; medical imaging; diagnostic; genetic disorder; ss.

OS Homo sapiens.

XX WO200175067-A2.

PD 11-OCT-2001.

XX 30-MAR-2001; 2001WO-US008631.

XX 31-MAR-2000; 2000US-00540217.

PR 23-AUG-2000; 2000US-00649167.

XX (HYSE-) HYSEQ INC.

PI Dermanac RT, Lin C, Tang YT;

XX WPI; 2001-639362/73.

DR P-PSDB; ABG09611.

XX

PS Claim 1; SEQ ID NO 9602; 103pp; English.

XX The invention relates to isolated polynucleotide (I) and polypeptide (II)

XX sequences. (I) is useful as hybridisation probes, polymerase chain

XX reaction (PCR) primers, oligomers, and for chromosome and gene mapping,

XX and in recombinant production of (II). The polynucleotides are also used

XX in diagnostics as expressed sequence tags for identifying expressed

XX genes. (I) is useful in gene therapy techniques to restore normal

XX activity of (II) or to treat disease states involving (II). (II) is

XX useful for generating antibodies against it, detecting or quantitating a

XX polypeptide in tissue, as molecular weight markers and as a food

XX supplement. (II) and its binding partners are useful in medical imaging

XX of sites expressing (II). (I) and (II) are useful for treating disorders

XX involving aberrant protein expression or biological activity. The

XX polypeptide and polynucleotide sequences have applications in

XX diagnostics, forensics, gene mapping, identification of mutations

XX responsible for genetic disorders or other traits to assess biodiversity

XX and to produce other types of data and products dependent on DNA and

XX amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic

CC coding sequences of the invention. Note: The sequence data for this

CC patent did not appear in the printed specification, but was obtained in

CC electronic format directly from WIPO at

CC ftp.wipo.int/pub/published\_pct\_sequences

XX

XX Sequence 2914 BP; 675 A; 814 C; 801 G; 624 T; 0 U; 0 Other;

SO

Alignment of: us-10-726-967a-1 x AAS73798 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

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27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla 37
:::|||||:::|:::|:::|
179 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCT 147
```

Sequence name: rngp2ndb:AAF28101

Sequence documentation:

ID AAF28101 standard; DNA; 3252 BP.

XX AAF28101;

DT 02-APR-2001 (first entry)

XX Memapsin 2 DNA.

XX Memapsin 2; catalyst; Alzheimer's; ds.

OS Homo sapiens.

XX WO200100663-A2.

PD 04-JUN-2001.

XX 27-JUN-2000; 2000WO-US017661.

XX 28-JUN-1999; 99US-0141363P.

PR 30-NOV-1999; 99US-0168060P.

PR 25-JAN-2000; 2000US-0177836P.

PR 27-JAN-2000; 2000US-0178368P.

PR 08-JUN-2000; 2000US-0210292P.

XX (OKLA-) OKLAHOMA MEDICAL RES FOUND.

PA Tang JUN, Lin X, Koelsch G;

XX WPI; 2001-102885/11.

DR Purified recombinant catalytically active memapsin 2, used to screen

XX inhibitors of it, which are used to treat and prevent Alzheimer's

XX disease.

XX Example 1; Page 71-72; 86pp; English.

XX The present invention relates to a purified recombinant catalytically

XX active memapsin 2. The invention may be used for isolating inhibitors

XX which are used to treat or prevent Alzheimer's disease. The invention may

XX also be used to screen for individuals more genetically prone to develop

XX Alzheimer's disease

XX Sequence 3252 BP; 804 A; 863 C; 811 G; 771 T; 0 U; 3 Other;

SO

Alignment of: us-10-726-967a-1 x AAF28101 ..

Alignment segment 1/1: (-)





Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
140 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCTCT      108

```

Sequence name: rngp2ndb:ABK8641

Sequence documentation:

ID ABK8641 standard; cDNA; 3252 BP.

AC ABK8641;

DT 07-OCT-2002 (first entry)

DE cDNA encoding human memapsin 2.

Human; memapsin 2; beta secretase; aspartic protease; APP;  
 beta-amyloid precursor protein; amyloid plaque; Alzheimer's disease;  
 neuroprotective; neurotropic; expressed sequence tag; EST; gene; ss.

OS Homo sapiens.

FH Key Location/Qualifiers

FT CDS 1..1467

FT /tag= a

FT /product= "Memapsin 2"

FT /note= "This sequence lacks a start codon"

US2002049303-A1.

25-APR-2002.

28-FEB-2001; 2001US-00796264.

28-JUN-1999; 99US-0141363P.

30-NOV-1999; 99US-0168060P.

25-JAN-2000; 2000US-017836P.

27-JUN-2000; 2000US-017836P.

27-JUN-2000; 2000US-00604608.

(TANG/) TANG J J N.

(LINX/) LIN X.

(KOEL/) KOELSCH G.

(HONG/) HONG L.

Tang JUN, Lin X, Koelsch G, Hong L;

WPI; 2002-507280/54.

P-PSDB; AAU99488.

New recombinant catalytically active memapsin 2, useful to screen for  
 inhibitors of memapsin 2 which can be used to prevent and treat  
 Alzheimer's disease.

Example 1; Page 20-21; 44p; English.

The present invention relates to methods for the production of purified,  
 recombinant catalytically active, memapsin 2 (beta secretase). Memapsin  
 2, a member of the aspartic protease family, cleaves beta-amyloid  
 precursor protein (APP) found in amyloid plaques. The recombinant  
 memapsin 2 is useful for identifying inhibitors of memapsin 2 in the  
 design of drugs for the treatment and/or prevention of Alzheimer's

CC disease. The recombinant memapsin 2 can be used to immunise against  
 CC Alzheimer's disease. The present sequence encodes human memapsin 2  
 XX  
 SQ Sequence 3252 BP; 804 A; 863 C; 811 G; 771 T; 0 U; 3 Other;

Alignment of: us-10-726-967a-1 x ABK8641 ..

Alignment segment 1/1: (-)

Quality:	32.00	Score:	264
Matching length:	11	Total length:	11
Matching Percent Similarity:	81.82	Matching Percent Identity:	54.55
Total Percent Similarity:	81.82	Total Percent Identity:	54.55
Gaps:	0		

Alignment:

```

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAla      37
:::|||||::|::|::|::|::|::|::|::|::|::|
140 AAGCTGCCCCCTCCGCGCGGCTCTCGGCTCTCT      108

```

Sequence name: rngp2ndb:ABX11591

Sequence documentation:

ID ABX11591 standard; cDNA; 3252 BP.

AC ABX11591;

DT 01-MAY-2003 (first entry)

DE Human partial cDNA encoding memapsin 2.

Human; ss; memapsin 2; beta-secretase; beta-amyloid precursor protein;  
 beta-amyloid peptide; Alzheimer's disease; neurotropic; neuroprotective.

OS Homo sapiens.

FH Key Location/Qualifiers

FT CDS 1..1467

FT /tag= a

FT /product= "Memapsin 2"

FT /note= "No start codon shown"

US2002164760-A1.

07-NOV-2002.

28-FEB-2001; 2001US-00795903.

28-JUN-1999; 99US-0141363P.

30-NOV-1999; 99US-0168060P.

25-JAN-2000; 2000US-017836P.

27-JUN-2000; 2000US-017836P.

27-JUN-2000; 2000US-0210292P.

27-JUN-2000; 2000US-00604608.

(OKLA-) OKLAHOMA MEDICAL RES FOUND.

Lin X, Koelsch G, Tang JUN;

WPI; 2003-255218/25.

P-PSDB; ABG76101.

New purified recombinant catalytically active memapsin 2 (beta-  
 secretase), useful for designing and screening of specific inhibitors for  
 the diagnosis, prevention and/or treatment of Alzheimer's disease.

Example 1; Page 20-21; 44p; English.

The invention relates to a purified recombinant catalytically active  
 memapsin 2, a beta-secretase which produces the beta-amyloid peptide from  
 the beta amyloid precursor protein. Also included are producing the above



PR 17-MAR-2000; 2000US-0190076P.  
PR 18-APR-2000; 2000US-0198123P.  
PR 19-MAY-2000; 2000US-0205515P.  
PR 07-JUN-2000; 2000US-0209467P.  
PR 28-JUN-2000; 2000US-0214886P.  
PR 30-JUN-2000; 2000US-0215135P.  
PR 07-JUL-2000; 2000US-0216647P.  
PR 07-JUL-2000; 2000US-0216880P.  
PR 11-JUL-2000; 2000US-0217487P.  
PR 11-JUL-2000; 2000US-0217496P.  
PR 14-JUL-2000; 2000US-0218290P.  
PR 26-JUL-2000; 2000US-0220363P.  
PR 26-JUL-2000; 2000US-0220964P.  
PR 14-AUG-2000; 2000US-0224518P.  
PR 14-AUG-2000; 2000US-0224519P.  
PR 14-AUG-2000; 2000US-0225213P.  
PR 14-AUG-2000; 2000US-0225214P.  
PR 14-AUG-2000; 2000US-0225266P.  
PR 14-AUG-2000; 2000US-0225267P.  
PR 14-AUG-2000; 2000US-0225267P.  
PR 14-AUG-2000; 2000US-0225268P.  
PR 14-AUG-2000; 2000US-0225270P.  
PR 14-AUG-2000; 2000US-0225447P.  
PR 14-AUG-2000; 2000US-0225757P.  
PR 14-AUG-2000; 2000US-0225758P.  
PR 14-AUG-2000; 2000US-0225759P.  
PR 18-AUG-2000; 2000US-0226279P.  
PR 22-AUG-2000; 2000US-0226681P.  
PR 22-AUG-2000; 2000US-0226686P.  
PR 23-AUG-2000; 2000US-0227182P.  
PR 23-AUG-2000; 2000US-0227009P.  
PR 30-AUG-2000; 2000US-0228924P.  
PR 01-SEP-2000; 2000US-0229287P.  
PR 01-SEP-2000; 2000US-0229343P.  
PR 01-SEP-2000; 2000US-0229344P.  
PR 01-SEP-2000; 2000US-0229345P.  
PR 05-SEP-2000; 2000US-0229509P.  
PR 05-SEP-2000; 2000US-0229513P.  
PR 06-SEP-2000; 2000US-0230437P.  
PR 06-SEP-2000; 2000US-0230438P.  
PR 08-SEP-2000; 2000US-0231242P.  
PR 08-SEP-2000; 2000US-0231243P.  
PR 08-SEP-2000; 2000US-0231244P.  
PR 08-SEP-2000; 2000US-0231413P.  
PR 08-SEP-2000; 2000US-0231414P.  
PR 08-SEP-2000; 2000US-0232080P.  
PR 08-SEP-2000; 2000US-0232081P.  
PR 12-SEP-2000; 2000US-0231968P.  
PR 14-SEP-2000; 2000US-0232397P.  
PR 14-SEP-2000; 2000US-0232398P.  
PR 14-SEP-2000; 2000US-0232399P.  
PR 14-SEP-2000; 2000US-0232400P.  
PR 14-SEP-2000; 2000US-0232401P.  
PR 14-SEP-2000; 2000US-0233063P.  
PR 14-SEP-2000; 2000US-0233064P.  
PR 14-SEP-2000; 2000US-0233065P.  
PR 21-SEP-2000; 2000US-0234223P.  
PR 21-SEP-2000; 2000US-0234274P.  
PR 25-SEP-2000; 2000US-0234997P.  
PR 25-SEP-2000; 2000US-0234998P.  
PR 26-SEP-2000; 2000US-0235834P.  
PR 27-SEP-2000; 2000US-0235834P.  
PR 27-SEP-2000; 2000US-0235836P.  
PR 29-SEP-2000; 2000US-0236327P.  
PR 29-SEP-2000; 2000US-0236367P.  
PR 29-SEP-2000; 2000US-0236368P.  
PR 29-SEP-2000; 2000US-0236369P.  
PR 29-SEP-2000; 2000US-0236370P.  
PR 02-OCT-2000; 2000US-0236802P.  
PR 02-OCT-2000; 2000US-0237037P.  
PR 02-OCT-2000; 2000US-0237038P.  
PR 02-OCT-2000; 2000US-0237039P.  
PR 13-OCT-2000; 2000US-0237040P.  
PR 13-OCT-2000; 2000US-0239935P.

PR 13-OCT-2000; 2000US-0239937P.  
PR 20-OCT-2000; 2000US-0240960P.  
PR 20-OCT-2000; 2000US-0241221P.  
PR 20-OCT-2000; 2000US-0241785P.  
PR 20-OCT-2000; 2000US-0241786P.  
PR 20-OCT-2000; 2000US-0241787P.  
PR 20-OCT-2000; 2000US-0241808P.  
PR 20-OCT-2000; 2000US-0241809P.  
PR 20-OCT-2000; 2000US-0241826P.  
PR 01-NOV-2000; 2000US-0244617P.  
PR 01-NOV-2000; 2000US-0246474P.  
PR 08-NOV-2000; 2000US-0246475P.  
PR 08-NOV-2000; 2000US-0246476P.  
PR 08-NOV-2000; 2000US-0246522P.  
PR 08-NOV-2000; 2000US-0246527P.  
PR 08-NOV-2000; 2000US-0246528P.  
PR 08-NOV-2000; 2000US-0246532P.  
PR 08-NOV-2000; 2000US-0246533P.  
PR 08-NOV-2000; 2000US-0246523P.  
PR 08-NOV-2000; 2000US-0246524P.  
PR 08-NOV-2000; 2000US-0246525P.  
PR 08-NOV-2000; 2000US-0246526P.  
PR 08-NOV-2000; 2000US-0246527P.  
PR 08-NOV-2000; 2000US-0246528P.  
PR 08-NOV-2000; 2000US-0246532P.  
PR 08-NOV-2000; 2000US-0246533P.  
PR 08-NOV-2000; 2000US-0246609P.  
PR 08-NOV-2000; 2000US-0246610P.  
PR 08-NOV-2000; 2000US-0246611P.  
PR 08-NOV-2000; 2000US-0246613P.  
PR 17-NOV-2000; 2000US-0249207P.  
PR 17-NOV-2000; 2000US-0249208P.  
PR 17-NOV-2000; 2000US-0249209P.  
PR 17-NOV-2000; 2000US-0249210P.  
PR 17-NOV-2000; 2000US-0249211P.  
PR 17-NOV-2000; 2000US-0249212P.  
PR 17-NOV-2000; 2000US-0249213P.  
PR 17-NOV-2000; 2000US-0249214P.  
PR 17-NOV-2000; 2000US-0249215P.  
PR 17-NOV-2000; 2000US-0249216P.  
PR 17-NOV-2000; 2000US-0249217P.  
PR 17-NOV-2000; 2000US-0249218P.  
PR 17-NOV-2000; 2000US-0249244P.  
PR 17-NOV-2000; 2000US-0249245P.  
PR 17-NOV-2000; 2000US-0249246P.  
PR 17-NOV-2000; 2000US-0249265P.  
PR 17-NOV-2000; 2000US-0249265P.  
PR 17-NOV-2000; 2000US-0249297P.  
PR 17-NOV-2000; 2000US-0249299P.  
PR 17-NOV-2000; 2000US-0249300P.  
PR 01-DEC-2000; 2000US-0250160P.  
PR 01-DEC-2000; 2000US-0250391P.  
PR 03-DEC-2000; 2000US-0251030P.  
PR 05-DEC-2000; 2000US-0251988P.  
PR 05-DEC-2000; 2000US-0256719P.  
PR 06-DEC-2000; 2000US-0251479P.  
PR 08-DEC-2000; 2000US-0251856P.  
PR 08-DEC-2000; 2000US-0251868P.  
PR 08-DEC-2000; 2000US-0251869P.  
PR 08-DEC-2000; 2000US-0251899P.  
PR 08-DEC-2000; 2000US-0251990P.  
PR 11-DEC-2000; 2000US-0251990P.  
PR 05-JAN-2001; 2001US-0259678P.  
XX  
XX  
PA (HUMA-) HUMAN GENOME SCI INC.  
XX  
XX Rosen CA, Barash SC, Ruben SM;  
PI WPI; 2001-465566/50.  
DR P-PSDB; AAU23068.  
XX  
XX Novel polypeptides and polynucleotides useful for diagnosing, preventing,  
PT treating neural, immune system, muscular, reproductive, pulmonary,  
PT cardiovascular, renal, proliferative disorders and cancerous diseases.  
XX  
XX Claim 4; SEQ ID NO 164; 1180bp; English.  
XX  
XX The present invention relates to the isolation of novel human enzyme  
CC



PA (YANR/) YAN R.  
 XX  
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 XX  
 DR WPI, 2001-502548/55.  
 DR P-PSDB; AA007214.  
 XX  
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT proase 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.  
 XX  
 PS Example 9, Page 156, 185pp; English.  
 XX  
 CC The invention relates to a novel purified polypeptide comprising a  
 CC fragment of mammalian aspartyl proase 2 (Asp2) protein which lacks the  
 CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
 CC and the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. Also included is an isoform of amyloid protein precursor (APP)  
 CC comprising the amino acid sequence of a APP or its fragment containing an  
 CC APP cleavage site recognizable by a mammalian beta-secretase, and further  
 CC comprising two lysine residues at the carboxyl terminus of the amino acid  
 CC sequence of the mammalian APP or APP fragment. The polypeptides are used  
 CC for assaying for modulators of beta-secretase activity; identifying  
 CC agents that inhibit the APP processing activity of human Asp2 aspartyl  
 CC protease (hu-Asp2); identifying agents that modulate the activity of Asp2  
 CC and for reducing cellular production of amyloid beta (Abeta) from APP.  
 CC Agents identified by the above methods are useful for treating  
 CC Alzheimer's disease; and for identifying modulators of amyloid-beta  
 CC (Abeta) peptide production, for use in designing therapeutics for the  
 CC treatment or prevention of Alzheimer's disease. Probes and primers  
 CC derived from Asp nucleic acid sequences are useful for detecting hu-Asp  
 CC nucleic acids in in vitro assays and in Northern and Southern blots. The  
 CC present sequence represents the coding sequence of T7-caspase-8 leader  
 CC human-Asp-2a delta TM construct which has a T7 tag, a caspase 8 leader  
 CC sequence and cleavage site, and lacks the transmembrane domain. This  
 CC construct was used for bacterial expression and purification of human  
 CC Asp2a. (Updated on 11-SEP-2003 to standardise OS field)  
 CC  
 SQ Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x AAS11714 ..  
 Alignment segment 1/1: (+)  
 Matching Length: 28.00  
 Matching Percent Similarity: 83.33  
 Total Percent Similarity: 62.50  
 Gaps: 1  
 Total length: 277  
 Total Percent Identity: 58.33  
 Total Percent Identity: 43.75  
 Alignment:  
 27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38  
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 1170 CGCTTCCATGTCACGATGAGTTTCAGACGCGCGTGAAGGCC 1217  
 Sequence name: rngp2ndb:AA017877  
 Sequence documentation:  
 ID AAD17877 standard; cDNA; 1278 BP.  
 XX  
 AC AAD17877;  
 XX  
 DT 10-DEC-2001 (first entry)  
 XX  
 DE T7-Caspase-Caspase 8 cleavage-human-pro-Asp2(a) lacking TM domain cDNA.  
 XX  
 KW Human; aspartyl proase 1; Asp1; amyloid precursor protein; APP;  
 KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;  
 KW amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;  
 KW T7-Caspase-Caspase 8 cleavage-human-pro-Asp 2(a) protein; se.  
 XX

OS Homo sapiens.  
 OS Synthetic.  
 XX  
 FH Key Location/Qualifiers  
 FT CDS 1..1278  
 FT /tag= a  
 FT /product= "T7-Caspase-Caspase 8 cleavage-Human-pro- Asp  
 FT 2(a) protein lacking transmembrane domain"  
 XX  
 PN GB2357767-A.  
 XX  
 PD 04-JUL-2001.  
 XX  
 PF 22-SEP-2000; 2000GB-00023315.  
 XX  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99WO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 PR 06-DEC-1999; 99US-0169232P.  
 XX  
 PA (PHMA ) PHARMACIA & UPJOHN CO.  
 XX  
 PI Bienkowski MJ, Gurney M;  
 XX  
 DR WPI; 2001-444208/48.  
 DR P-PSDB; AAE10641.  
 XX  
 XX Polypeptide comprising fragments of human aspartyl proase with amyloid  
 PT precursor protein processing activity and alpha-secretase activity, for  
 PT identifying modulators useful in treating Alzheimer's disease.  
 XX  
 PS Example 9, Page 128; 187pp; English.  
 XX  
 CC The patent discloses human aspartyl proase 1 (hu-Asp1) or modified Asp1  
 CC proteins which lack transmembrane domain or amino terminal domain or  
 CC cytoplasmic domain and retains alpha-secretase activity and amyloid  
 CC protein precursor (APP) processing activity. The proteins of the  
 CC invention are useful for assaying hu-Asp1 alpha-secretase activity, which  
 CC in turn is useful for identifying modulators of hu-Asp1 alpha-secretase  
 CC activity, where modulators that increase hu-Asp1 alpha-secretase activity  
 CC are useful for treating Alzheimer's disease (AD) which causes progressive  
 CC dementia with consequent formation of amyloid plaques, neurofibrillary  
 CC tangles, gliosis and neuronal loss. Hu-Asp1 proase substrate is useful  
 CC for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein  
 CC with the substrate under acidic conditions and determining the level of  
 CC hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding T7-  
 CC Caspase-Caspase 8 cleavage-human-pro-Asp 2(a) protein lacking a  
 CC transmembrane (TM) domain which is generated from human Asp 2(a) protein  
 CC by the addition of T7 tag and caspase 8 leader sequence at its N-terminal  
 CC end and deletion of its C-terminal transmembrane domain  
 CC  
 SQ Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x AAD17877 ..  
 Alignment segment 1/1: (+)  
 Matching Length: 28.00  
 Matching Percent Similarity: 83.33  
 Total Percent Similarity: 62.50  
 Gaps: 1  
 Total length: 277  
 Total Percent Identity: 58.33  
 Total Percent Identity: 43.75  
 Alignment:  
 27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38  
 ||||| ||||| :|||: ||||| |||||  
 1170 CGCTTCCATGTCACGATGAGTTTCAGACGCGCGTGAAGGCC 1217  
 Sequence name: rngp2ndb:AA013033  
 Sequence documentation:  
 ID AAD13033 standard; cDNA; 1278 BP.  
 XX  
 AC AAD13033;  
 XX  
 DT 10-DEC-2001 (first entry)  
 XX  
 DE T7-Caspase-Caspase 8 cleavage-human-pro-Asp2(a) lacking TM domain cDNA.  
 XX  
 KW Human; aspartyl proase 1; Asp1; amyloid precursor protein; APP;  
 KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;  
 KW amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;  
 KW T7-Caspase-Caspase 8 cleavage-human-pro-Asp 2(a) protein; se.  
 XX

ID AAD13033 standard; CDNA; 1278 BP.  
 XX AAD13033;  
 AC  
 XX  
 DT 23-OCT-2001 (first entry)  
 XX  
 DE 17-Caspase-Caspase 8 cleavage-Human-pro-Asp2(a) deltatm protein cDNA.  
 XX  
 KM Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;  
 KM beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;  
 KM neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;  
 KM neuroprotective; antisense therapy; gene therapy;  
 KM caspase-caspase 8 cleavage-pro-Asp2(a) deltatm protein; ss.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT CDS 1..1278  
 FT /\*tag= a  
 FT /product= "T7-Caspase-Caspase 8 cleavage-Human-pro-  
 FT Asp2(a) deltatm protein"  
 FT  
 XX  
 XX MO200150829-A2.  
 XX  
 PD 19-JUL-2001.  
 XX  
 XX 09-MAY-2001; 2001MO-IB000799.  
 XX  
 PR 09-MAY-2001; 2001MO-IB000799.  
 XX  
 XX (BIEN/) BIENKOWSKI M J.  
 XX (GURNEY/) GURNEY M E.  
 XX (HEINRICH/) HEINRICHSON R L.  
 XX (PARODI/) PARODI L A.  
 XX (YANR/) YAN R.  
 XX  
 PI Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
 PI WPI; 2001-483072/52.  
 DR P-PSDB; AAE06871.  
 DR  
 XX  
 PT Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.  
 XX  
 XX Example 9; Page 158; 185pp; English.  
 XX  
 PS The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid  
 CC precursor protein (APP) isoforms and their corresponding DNA molecules.  
 CC Human aspartyl proteases can act as beta-secretase proteases useful for  
 CC treating Alzheimer's disease. APP isoforms are useful for identifying  
 CC modulators of amyloid-beta peptide production, for use in designing  
 CC therapeutics for the treatment and prevention of Alzheimer's disease,  
 CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis  
 CC and neuronal loss. APP isoforms are also used in methods for identifying  
 CC inhibitors and modulators of human Asp2 activity. The invention relates  
 CC to a method for identifying agents that modulate the activity of human  
 CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
 CC as a means to screen in cellular assays for the inhibitors of beta- and  
 CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in  
 CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
 CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.  
 CC The present cDNA sequence encodes T7-Caspase-Caspase 8 cleavage- Human-  
 CC pro-aspartyl protease 2a (Asp2a) deltatm protein which is obtained by the  
 CC addition of T7 tag and caspase 8 leader sequence at the N-terminal end  
 CC and deletion of the transmembrane domain at the C-terminal end of Hu-  
 CC Asp2a. Human Asp2a has beta-secretase activity  
 CC  
 SQ Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;  
 XX  
 Alignment of: us-10-726-967a-1 x AAD13033 ..

Alignment segment 1/1: (+)  
 Matching Length: 28.00  
 Matching Percent Similarity: 83.33  
 Total Percent Similarity: 62.50  
 Gaps: 1  
 Total Length: 277  
 Total Identity: 16  
 Total Percent Identity: 58.33  
 Total Percent Identity: 43.75  
 Alignment:  
 27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
 1170 CGCTTGCCATGCGACGATGACTTCAGACGCGCGGTGCAAGCCC 1217  
 Sequence name: rngp2ndb: AAD06751  
 Sequence documentation:  
 ID AAD06751 standard; CDNA; 1278 BP.  
 XX  
 AC AAD06751;  
 XX  
 DT 10-AUG-2001 (first entry)  
 XX  
 DE T7-Caspase-Caspase 8-cleavage-human-pro-Asp-2(a) delta TM protein cDNA.  
 XX  
 KM Human; alpha-secretase; amyloid precursor protein; APP; therapy;  
 KM Alzheimer's disease; anti-Alzheimer's; aspartyl protease 2a; Asp2a;  
 KM beta-secretase; caspase-caspase 8-Asp-2a delta TM; ss.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT CDS 1..1278  
 FT /\*tag= a  
 FT /product= "T7-Caspase-Caspase 8-cleavage-human-pro- Asp-  
 FT 2(a) delta TM protein"  
 FT  
 XX  
 XX MO200123533-A2.  
 XX  
 PD 05-APR-2001.  
 XX  
 XX 22-SEP-2000; 2000MO-US025080.  
 XX  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99MO-US020881.  
 PR 13-OCT-1999; 99US-00416901.  
 PR 06-DEC-1999; 99US-0169232P.  
 XX  
 XX (PHAA ) PHARMACIA & UPJOHN CO.  
 XX  
 PI Gurney M, Bienkowski MJ;  
 PI WPI; 2001-290516/30.  
 DR P-PSDB; AAE02553.  
 DR  
 XX  
 PT Enzymes that cleave the alpha-secretase site of the amyloid precursor  
 PT protein, useful for the treatment of Alzheimer's disease.  
 XX  
 XX Example 9; Page 157; 189pp; English.  
 XX  
 PS The present invention relates to enzymes for cleaving the alpha-  
 CC secretase site of the amyloid precursor protein (APP) and methods of  
 CC identifying those enzymes. The methods may be used to identify enzymes  
 CC that may be used to cleave the alpha-secretase cleavage site of the APP  
 CC protein. The enzymes may be used to treat or modulate the progress of  
 CC Alzheimer's disease. The present sequence is a cDNA encoding human  
 CC aspartyl protease 2a (Asp-2a) caspase-caspase 8-deltatm protein which is  
 CC obtained by deleting the transmembrane domain and adding a T7-caspase  
 CC leader sequence at the N-terminal end. This sequence has beta-secretase  
 CC protease activity  
 XX

SO Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD06751 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	277
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Alignment:

```

27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38
1170 CGCTTGCCATGTGCACATGATTCAGACGCGCGGTGGAAGCC 1217

```

Sequence name: rngp2ndb:AA511529

Sequence documentation:

ID AA511529 standard; cDNA; 1278 BP.

AC AA511529;

DT 24-OCT-2001 (first entry)

DE T7-Caspase-caspase-8-Human-pro-Asp 2(a) delta TM fusion protein cDNA.

XX Human; Aspartyl protease; beta-secretase; neurotropic; ASP2;  
 KW neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;  
 KM amyloid-beta; Abeta; T7-caspase-caspase 8-Human-pro-Asp 2(a) delta TM;  
 KM 88.

OS Homo sapiens.  
 OS Synthetic.

FX Key Location/Qualifiers

FT CDS 1..1278

FT /tag= a  
 /product= "T7-Caspase-caspase 8-Human-pro-Asp 2(a) delta  
 TM fusion protein"

FT sig\_peptide

FT /tag= b  
 /note= "Caspase leader sequence"

FT mat\_peptide

FT /label= Mature\_Asp\_2(a)  
 /note= "Also encodes 5 extra N-terminal amino acids  
 constituting a caspase 8 cleavage site"

FT WO200149098-A2.

FN 12-JUL-2001.

PD 09-MAY-2001; 2001WO-IB000798.

PF 09-MAY-2001; 2001WO-IB000798.

PR 09-MAY-2001; 2001WO-IB000798.

XX (BIEN/) BIENKOWSKI M J.

PA (GURN/) GURNEY M E.

PA (HEIN/) HEINRIKSON R L.

PA (PARO/) PARODI L A.

PA (YANR/) YAN R.

XX Blenkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-502549/55.

DR P-PSDB; AAU06615.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.

XX Example 9; Page 158; 185pp; English.

PS The invention relates to a purified polypeptide comprising a fragment of  
 XX mammalian aspartyl protease (Asp)2 protein which lacks the Asp2  
 CC transmembrane domain and the Asp2 protein, and where the polypeptide and  
 CC the fragment retain the beta-secretase activity of the mammalian Asp2  
 CC protein. The invention also details polynucleotides for the Asp proteins  
 CC and vectors expressing them, and a polypeptide (isoform of an APP or  
 CC protein precursor (APP) comprising the amino acid sequence of an APP or  
 CC its fragment containing an APP cleavage site recognizable by a mammalian  
 CC beta-secretase, and further comprising two lysine residues at the  
 CC carboxyl terminus of the amino acid sequence of the mammalian APP or APP  
 CC fragment. Also included in the invention are methods of identifying  
 CC modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are  
 CC useful for treating Alzheimer's disease. APP is useful in methods for  
 CC identifying inhibitors or modulators of human Asp2 activity and amyloid-  
 CC beta (Abeta) peptide production. APP is also useful in designing  
 CC therapeutics for the treatment or prevention of Alzheimer's disease. APP  
 CC comprising the APP-Sw-beta-secretase peptide sequence (NMDA), which is  
 CC associated with increased levels of Abeta processing is useful for  
 CC relating the Alzheimer's research. The expression vector is useful for  
 CC recombinantly expressing APP. Nucleic acids that hybridize to Asp  
 CC oligonucleotides are useful as probes or primers. The probes are useful  
 CC for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and  
 CC Southern blots. The present sequence encodes T7-Caspase- caspase 8-Human-  
 CC pro-Asp 2(a) delta TM fusion protein which has a N-terminal T7 tag to aid  
 CC purification when expressed in E. coli, a Caspase leader sequence and a  
 CC caspase 8 cleavage signal to aid cleavage of the signal peptide

XX Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AA511529 ..

Alignment segment 1/1: (+)

Quality:	28.00	Score:	277
Matching length:	12	Total length:	16
Matching Percent Similarity:	83.33	Matching Percent Identity:	58.33
Total Percent Similarity:	62.50	Total Percent Identity:	43.75

Alignment:

```

27 ArgLeuPro.....LeuArgSerGlyLeuGlyGlyAlaPro 38
1170 CGCTTGCCATGTGCACATGATTCAGACGCGCGGTGGAAGCC 1217

```

Sequence name: rngp2ndb:ABL52469

Sequence documentation:

ID ABL52469 standard; cDNA; 1278 BP.

AC ABL52469;

DT 16-JUL-2002 (first entry)

DE T7-caspase-caspase 8 cleavage-human-pro-Asp-2(a)deltaTM nucleotide.

XX Human; Asp-1; Asp-2; aspartyl protease; Alzheimer's disease; proteolytic;

KW amyloid precursor protein; APP; gene; 88.

XX Homo sapiens.

XX Key Location/Qualifiers

FT CDS 1..1278

FT /tag= a  
 /product= "T7-caspase-caspase 8 cleavage-human-pro- Asp-  
 2(a)deltaTM"

PN GB2367060-A.

XX 27-MAR-2002.





Matching length: 12 Total length: 16  
 Matching Percent Similarity: 83.33 Matching Percent Identity: 58.33  
 Total Percent Similarity: 62.50 Total Percent Identity: 43.75  
 Gaps: 1

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
 |||||  
 1170 CGCTTGCCATGTCACAGATGATTACAGACGCGGTGAAGGCC 1217

Sequence name: rngp2ndb:AD050435

Sequence documentation:

ID AD050435 standard; DNA; 1278 BP.

AC AD050435;

DT 29-JUL-2004 (first entry)

DE T7-Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltaTM DNA.

XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;  
 KW Alzheimer's disease; gene therapy; caspase; human; gene; chimeric; ds.  
 XX Homo sapiens.  
 OS Chimeric.  
 OS Unidentified.

XX Unidentified.

OS Unidentified.

OS Unidentified.

OS Unidentified.

FT Key Location/Qualifiers  
 CDS 1..1278  
 /tag= a  
 /product= "T7-Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltaTM protein"

XX US6737510-B1.

XX 18-MAY-2004.

PF 12-APR-2000; 2000US-00548373.

PR 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHMA ) PHARMACIA &amp; UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2004-387112/36.

DR P-PSDB; AD050436.

XX New Asp2 aspartyl protease protein comprising tripeptide DRG and DSG

XX involved in processing amyloid precursor protein into amyloid beta,

XX useful in preparing a composition for treating or preventing Alzheimer's

XX disease.

XX Example 9; SEQ ID NO 27; 108bp; English.

XX The invention relates to a method for identifying an agent that decreases

XX the protease activity of the aspartyl protease (Asp) polypeptide. It also

XX provides enzyme and enzymatic procedures for cleaving the beta secretase

XX cleavage site of the amyloid precursor protein (APP). The invention is

XX useful in preparing a composition for treating or preventing Alzheimer's

XX disease. It is also useful in gene therapy. The present sequence is T7-

XX Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltaTM chimeric DNA. This

XX sequence is used to illustrate the method of the invention.

XX Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;

SQ Alignment of: us-10-726-967a-1 x AD050435 ..

Alignment segment 1/1: (+)

Matching length: 28.00 Escore: 277  
 Matching Percent Similarity: 83.33 Matching Percent Identity: 58.33  
 Total Percent Similarity: 62.50 Total Percent Identity: 43.75  
 Gaps: 1

Alignment:

27 ArgLeuPro.....LeuArgSerGlyLeuGlyAlaPro 38  
 |||||  
 1170 CGCTTGCCATGTCACAGATGATTACAGACGCGGTGAAGGCC 1217

Sequence name: rngp2ndb:ADR75348

Sequence documentation:

ID ADR75348 standard; DNA; 1278 BP.

AC ADR75348;

DT 18-NOV-2004 (first entry)

DE T7-Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltaTM DNA.

XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;  
 KW chromosome identification; Alzheimer's disease; human; caspase; chimeric;  
 KW gene; ds.  
 XX Homo sapiens.  
 OS Chimeric.  
 OS Unidentified.

XX Unidentified.

OS Unidentified.

OS Unidentified.

FT Key Location/Qualifiers  
 CDS 1..1278  
 /tag= a  
 /product= "T7-Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltaTM protein"

XX US2004166507-A1.

XX 26-AUG-2004.

PF 29-AUG-2003; 2003US-00652045.

PR 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (GURN/) GURNEY M E.

XX (BIEN/) BIENKOWSKI M J.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2004-624916/60.

DR P-PSDB; ADR75349.

XX Novel purified/isolated polynucleotide encoding polypeptide having

XX aspartyl protease activity involved in processing amyloid precursor

XX protein into amyloid beta, useful in identifying agent decreasing

XX activity of aspartyl protease.

XX Example 9; SEQ ID NO 27; 107bp; English.

XX The invention relates to nucleic acid sequences encoding aspartyl

XX protease (Asp) polypeptides having aspartyl protease activity involved in

XX processing amyloid precursor protein (APP) into amyloid beta. The

XX invention also relates to a method for identifying an agent that







PR 17-NOV-2000; 2000US-0249208P.  
 PR 17-NOV-2000; 2000US-0249209P.  
 PR 17-NOV-2000; 2000US-0249210P.  
 PR 17-NOV-2000; 2000US-0249211P.  
 PR 17-NOV-2000; 2000US-0249212P.  
 PR 17-NOV-2000; 2000US-0249213P.  
 PR 17-NOV-2000; 2000US-0249214P.  
 PR 17-NOV-2000; 2000US-0249215P.  
 PR 17-NOV-2000; 2000US-0249216P.  
 PR 17-NOV-2000; 2000US-0249217P.  
 PR 17-NOV-2000; 2000US-0249218P.  
 PR 17-NOV-2000; 2000US-0249244P.  
 PR 17-NOV-2000; 2000US-0249245P.  
 PR 17-NOV-2000; 2000US-0249264P.  
 PR 17-NOV-2000; 2000US-0249265P.  
 PR 17-NOV-2000; 2000US-0249287P.  
 PR 17-NOV-2000; 2000US-0249289P.  
 PR 17-NOV-2000; 2000US-0249300P.  
 PR 01-DEC-2000; 2000US-0250160P.  
 PR 01-DEC-2000; 2000US-0250391P.  
 PR 05-DEC-2000; 2000US-0251030P.  
 PR 05-DEC-2000; 2000US-0251988P.  
 PR 05-DEC-2000; 2000US-0256719P.  
 PR 06-DEC-2000; 2000US-0251479P.  
 PR 08-DEC-2000; 2000US-0251856P.  
 PR 08-DEC-2000; 2000US-0251868P.  
 PR 08-DEC-2000; 2000US-0251869P.  
 PR 08-DEC-2000; 2000US-0251989P.  
 PR 08-DEC-2000; 2000US-0251990P.  
 PR 11-DEC-2000; 2000US-0254097P.  
 PR 05-JAN-2001; 2001US-0259678P.  
 PA (HUMA-) HUMAN GENOME SCI INC.  
 XX  
 PI Rosen CA, Barash SC, Ruben SM;  
 XX  
 DR WPI, 2001-465566/50.  
 DR P-PSDB; AAU23068.  
 XX  
 PT Novel polypeptides and polynucleotides useful for diagnosing, preventing,  
 PT treating neural, immune system, muscular, reproductive, pulmonary,  
 PT cardiovascular, renal, proliferative disorders and cancerous diseases.  
 XX  
 PS Claim 4; SEQ ID NO 164; 1180bp; English.  
 XX  
 CC The present invention relates to the isolation of novel human enzyme  
 CC polypeptides (AAU22915-AAU23814), and the cDNA and genomic sequences  
 CC encoding them. The enzyme polypeptides of the invention may comprise the  
 CC functional classes of oxidoreductases, transferases, hydrolases, lyases,  
 CC isomerases or ligases. The sequences of the invention are useful in the  
 CC diagnosis, treatment, prevention and/or prognosis of a wide range of  
 CC disorders including hyperproliferative disorders (e.g. cancer),  
 CC immunodeficiency disorders (e.g. AIDS) autoimmune disorders (e.g.  
 CC arthritis), neurological disorders (e.g. Alzheimer's disease), metabolic  
 CC disorders (e.g. phenylketonuria), inflammatory disorders (e.g. asthma),  
 CC cardiovascular disorders (e.g. atherosclerosis), blood-related disorders  
 CC (e.g. haemophilia), reproductive disorders (e.g. infertility) and  
 CC infectious disorders (e.g. influenza). The polynucleotides of the  
 CC invention can also be used in gene therapy. AA540785-AA541684 represent  
 CC cDNA sequences encoding for the novel human enzyme polypeptides of the  
 CC invention. Note: The sequence data for this patent did not form part of  
 CC the printed specification, but was obtained in electronic format directly  
 CC from WIPO at ftp.wipo.int/pub/published\_pct\_sequences  
 XX  
 SQ Sequence 5925 BP; 1600 A; 1413 C; 1369 G; 1540 T; 0 U; 3 Other;  
 Alignment of: us-10-726-967a-1 x AA540938 ..  
 Alignment segment 1/1: (-)  
 Matching length: 28.00  
 Matching Percent Similarity: 71.43  
 Total length: 278  
 Matching Percent Identity: 42.86

Total Percent Similarity: 71.43  
 Gaps: 0  
 Total Percent Identity: 42.86  
 Alignment:  
 22 ThrGlnHieGlyIleArgLeuProLeuArgSerGlyLeuGly 35  
 3476 ACCAGCCTGGGTACCCAGCTACATTAGAGCGGGAGGGGA 3435  
 Sequence name: rngp2ndb:AAA28279  
 Sequence documentation:  
 ID AAA28279 standard; cDNA; 1503 BP.  
 XX  
 AC AAA28279;  
 XX  
 DT 12-FEB-2001 (first entry)  
 XX  
 DE Murine cDNA encoding beta-secretase.  
 XX  
 KM Beta-secretase; enzyme; amyloid plaque; Alzheimer's disease; mouse;  
 KM Down's syndrome; amyloid angiopathy; gene therapy; neuroprotective; ss.  
 XX  
 OS Mus sp.  
 XX  
 FH Key Location/Qualifiers  
 FT CDS 1..1503  
 FT /\*tag= a  
 FT /product= "Beta secretase"  
 FT /note= "No stop codon given"  
 FT  
 PN MO200058479-A1.  
 XX  
 PD 05-OCT-2000.  
 XX  
 PF 23-MAR-2000; 2000MO-US007755.  
 XX  
 PR 26-MAR-1999; 99US-00277229.  
 XX  
 PA (AMGE-) AMGEN INC.  
 PI Citron M, Vassar RJ, Bennett BD;  
 XX  
 DR WPI, 2000-594643/56.  
 DR P-PSDB; AAY94768.  
 XX  
 PT Isolated beta-secretase nucleic acids and encoded polypeptides, useful  
 PT for diagnosis and gene therapy of Alzheimer's disease.  
 XX  
 PS Claim 1; Fig 2; 145bp; English.  
 XX  
 CC This invention relates to 3 nucleotide sequences encoding beta-secretase  
 CC proteins. Beta-secretase is an enzyme involved in the production of one  
 CC of the components of amyloid plaques involved in Alzheimer's disease. The  
 CC invention includes an expression vector comprising the nucleotide  
 CC sequence, a host cell comprising the expression vector, and a process for  
 CC producing the protein through culturing the transformed cells. Also  
 CC included in the invention are a polypeptide derivative of the beta-  
 CC secretase protein, a fusion protein comprising beta-secretase fused to a  
 CC heterologous amino acid sequence, and a method for modulating the levels  
 CC of beta-secretase polypeptide in a mammal comprising administering the  
 CC polynucleotide sequence. Beta-secretase exhibits neuroprotective and  
 CC neurotropic activity. The beta-secretase gene and related genes on chromosomes  
 CC map locations of the beta-secretase gene and related genes on chromosomes  
 CC and as hybridization probes in diagnostic assays to test for the presence  
 CC of beta-secretase DNA or RNA, such as in Alzheimer's disease, Down's  
 CC syndrome, and amyloid angiopathy. The nucleotide sequence may also be  
 CC used as anti-sense inhibitors of beta-secretase expression. In gene  
 CC therapy of Alzheimer's disease, and for the identification of compounds  
 CC that modulate beta-secretase activity. Antibodies to the beta-secretase  
 CC protein may be used for in vitro and in vivo diagnostic purposes to  
 CC detect the presence of beta-secretase polypeptide in a body fluid or cell  
 CC sample. The present sequence represents murine cDNA encoding beta-

CC secretase

XX Sequence 1503 BP; 315 A; 439 C; 426 G; 323 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAA28279 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	280
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro 38  
 |||::|||::|||::|||  
 326 AGGAAGGGGTGTGGGCAAGCCCC 303

Sequence name: rmp2ndb:AAF83845

Sequence documentation:

ID AAF83845 standard; DNA; 1506 BP.

XX

AC AAF83845;

XX 06-AUG-2001 (first entry)

XX Mouse aspartic secretase-2 (mASP-2) encoding DNA.

DE

XX Aspartic secretase-2; mASP-2; Alzheimer's disease; cancer; nootropic;

XX neuroprotective; cytosolic; ds.

XX

OS Mus musculus.

XX

FH Key: Location/Qualifiers

PT CDS 1..1506

FT /tag= a

FT /product= "mASP-2"

PT

XX

PN WO20013660-A1.

XX

PD 25-MAY-2001.

XX

PF 16-NOV-2000; 2000WC-US031583.

XX

PR 16-NOV-1999; 99US-0165800P.

XX

PR 15-NOV-2000; 2000US-00713158.

XX

PA (SMIK ) SMITHKLINE BEECHAM CORP.

XX

PI (SMIK ) SMITHKLINE BEECHAM PLC.

XX

PI Zhu Y, Li X, Powell DJ, Christie G;

XX

DR WPI: 2001-343813/36.

XX

DR P-PSDB; AAB84948.

XX

PT New mouse aspartic secretase-2 polypeptide, useful for screening drugs

XX for the prevention and treatment of Alzheimer's disease and cancer.

XX

PS Claim 1; Page 23; 31pp; English.

XX

CC This DNA encodes a mouse aspartic secretase-2 (mASP-2) polypeptide. The

CC mASP-2 polypeptide can be expressed by standard recombinant methodology.

CC mASP-2 can be used to discover drugs for the prevention and treatment of

XX diseases including Alzheimer's, cancer, and prohormone processing

XX dysfunctions, particular where knockout mice are used

XX

SQ Sequence 1506 BP; 316 A; 439 C; 427 G; 324 T; 0 U; 0 Other;

XX

Alignment of: us-10-726-967a-1 x AAF83845 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	280
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro 38  
 |||::|||::|||::|||  
 326 AGGAAGGGGTGTGGGCAAGCCCC 303

Sequence name: rmp2ndb:AAA15664

Sequence documentation:

ID AAA15664 standard; DNA; 2043 BP.

XX

AC AAA15664;

XX 03-AUG-2000 (first entry)

XX Murine aspartyl protease 2 (a) (Asp2) nucleotide sequence.

DE

XX Aspartyl protease; aspartase; amyloid precursor protein; APP; Asp 2;

XX Alzheimer's disease; beta secretase site; mouse; ss.

XX

OS Mus musculus.

XX

PN WO200017369-A2.

XX

PD 30-MAR-2000.

XX

PF 23-SEP-1999; 99WC-US020881.

XX

PR 24-SEP-1998; 98US-0101594P.

XX

PR (PHAA ) PHARMACIA &amp; UPJOHN CO.

XX

PI Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX

DR WPI: 2000-303209/26.

XX

DR P-PSDB; AAY88427.

XX

PT New enzyme designated human aspartase useful in research into Alzheimer's

XX disease is capable of cleaving amyloid protein precursor at the beta

XX secretase site to produce amyloid beta peptide.

XX

PS Example 3; Fig 4; 183pp; English.

XX

CC This sequence represents the murine aspartyl protease 2 (Asp2) nucleotide

CC sequence. The invention relates to a protease (e.g. Asp2) capable of

CC cleaving the beta secretase site of amyloid precursor protein (APP). The

CC protease contains a sequence encoding the amino acid sequence DTG and a

CC sequence encoding DSG or DTG separated by 100-300 amino acids. When

CC mutated the APP gene causes an autosomal dominant form of Alzheimer's

CC disease. APP localises to the cell surface membrane and have a single C-

CC terminal transmembrane domain. Proteolytic processing of APP produces the

CC amyloid beta protein, which is possibly very important in Alzheimer's

CC disease. The invention includes a nucleotide sequence encoding the

CC protease, a vector containing the nucleotide sequence, and a cell line

CC comprising the vector. Methods for screening for inhibitors of beta

CC secretase activity are also given in the invention. The human aspartase

CC protein and nucleotide sequences and the methods for identifying

CC inhibitors of the protease, are useful in the treatment of and research

XX in to Alzheimer's disease

XX

SQ Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

XX

Alignment of: us-10-726-967a-1 x AAA15664 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	280
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro  
1562 AGGGAACCAACCAGATGTGTCTCCAGGGCGCTCTCCA

38

1527

Sequence name: rngp2ndb:AA511704

Sequence documentation:

ID AA511704 standard; DNA; 2043 BP.

AC AA511704;

XX 24-OCT-2001 (first entry)

XX DNA encoding mouse aspartyl protease 2a (Asp-2a).

XX Mouse; aspartyl protease 1; Asp-1; neurotrophic; neuroprotective;  
KW aspartyl protease 2; Asp2; amyloid protein precursor; APP;  
KW beta-secretase; Alzheimer's disease; de.

XX Mus sp.

XX Key Location/Qualifiers

FT CDS 1..1506

FT sig\_peptide 1..63

FT misc\_feature 64..135

FT misc\_feature 136..171

FT misc\_feature 172..1503

FT mat\_peptide 172..1503

FT /note= "Mature Aspartyl protease-2a"

FT /tag= e

FT /note= "Mature Aspartyl protease-2a"

FT /tag= e

FT /note= "Mature Aspartyl protease-2a"

FT /tag= e

FT /note= "Mature Aspartyl protease-2a"

FT /tag= e

FT /note= "Mature Aspartyl protease-2a"

FT /tag= e

FT /note= "Mature Aspartyl protease-2a"

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FT /note= "Mature Aspartyl protease-2a"

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FT /note= "Mature Aspartyl protease-2a"

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FT /tag= e

FT /note= "Mature Aspartyl protease-2a"

FT /tag= e

FT /note= "Mature Aspartyl protease-2a"

FT /tag= e

CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the  
CC Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide  
CC and the fragment retain the beta-secretase activity of the mammalian Asp2  
CC protein. Also included is an isoform of amyloid protein precursor (APP)  
CC comprising the amino acid sequence of a APP or its fragment containing an  
CC APP cleavage site recognizable by a mammalian beta-secretase, and further  
CC comprising two lysine residues at the carboxyl terminus of the amino acid  
CC sequence of the mammalian APP or APP fragment. The polypeptides are used  
CC for assaying for modulators of beta-secretase activity; identifying  
CC agents that inhibit the APP processing agents that modulate the activity of APP2  
CC protease (Hu-Asp2); identifying agents that modulate the activity of APP2  
CC agents and for reducing cellular production of amyloid beta (A-beta) from APP.  
CC A-beta identified by the above methods are useful for treating  
CC Alzheimer's disease; and for identifying modulators of amyloid-beta  
CC (A-beta) peptide production, for use in designing therapeutics for the  
CC treatment or prevention of Alzheimer's disease. Probes and primers  
CC derived from Asp nucleic acid sequences are useful for detecting Hu-Asp  
CC nucleic acids in in vitro assays and in Northern and Southern blots. The  
CC present sequence represents the coding sequence of mouse Asp-2a used in  
CC the methods of the invention

XX Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

XX Alignment of: us-10-726-967a-1 x AA511704 ..

XX Alignment segment 1/1: (-)

Quality:	27.00	Score:	280
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00

Gaps: 0

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro  
1562 AGGGAACCAACCAGATGTGTCTCCAGGGCGCTCTCCA

38

1527

Sequence name: rngp2ndb:AA511704

Sequence documentation:

ID AAD17867 standard; cDNA; 2043 BP.

AC AAD17867;

XX 10-DEC-2001 (first entry)

XX Murine aspartyl protease 2(a) [Asp2(a)] cDNA.

XX Murine; aspartyl protease 2(a); Asp2(a); amyloid precursor protein; APP;

KW Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;

KW amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;

KW ss.

XX Mus musculus.

XX Mus musculus.

XX Mus musculus.

XX Mus musculus.

XX Mus musculus.

XX Mus musculus.

XX Mus musculus.

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XX Mus musculus.

XX Mus musculus.

22-SEP-2000; 2000GB-00023315.

23-SEP-1999; 99US-00404133.

23-SEP-1999; 99US-0155493P.

23-SEP-1999; 99US-0155493P.

13-OCT-1999; 99US-00416901.

06-DEC-1999; 99US-0169232P.

Location/Qualifiers

/\*tag= a

/product= "Murine aspartyl protease 2(a)"

/tag= a

/note= "Murine aspartyl protease 2(a)"

/tag= a

/note= "Murine aspartyl protease 2(a)"

/tag= a

/note= "Murine aspartyl protease 2(a)"

/tag= a

/note= "Murine aspartyl protease 2(a)"

/tag= a

/note= "Murine aspartyl protease 2(a)"

/tag= a

/note= "Murine aspartyl protease 2(a)"

/tag= a

The invention relates to a novel purified polypeptide comprising a



XX (PHAA ) PHARMACIA & UPJOHN CO.  
PA Bienkowski MJ, Gurney M,  
PI WPI; 2001-444208/48.  
XX P-PSDB; AAE10631.  
DR Polypeptide comprising fragments of human aspartyl protease with amyloid  
XX precursor protein processing activity and alpha-secretase activity, for  
XX identifying modulators useful in treating Alzheimer's disease.  
PT Example 3; Fig 4; 187pp; English.  
XX  
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1  
XX proteins which lack transmembrane domain or amino terminal domain or  
XX cytoplasmic domain and retains alpha-secretase activity and amyloid  
XX protein precursor (APP) processing activity. The proteins of the  
XX invention are useful for assaying hu-Asp1 alpha-secretase activity, which  
XX in turn is useful for identifying modulators of hu-Asp1 alpha-secretase  
XX activity, where modulators that increase hu-Asp1 alpha-secretase activity  
XX are useful for treating Alzheimer's disease (AD) which causes progressive  
XX dementia with consequent formation of amyloid plaques, neurofibrillary  
XX tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful  
XX for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein  
XX with the substrate under acidic conditions and determining the level of  
XX hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding  
XX murine Asp2(a) protein  
SQ Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x AAD17867 ..  
Alignment segment 1/1: (-)  
Matching length: 27.00      Total length: 280  
Matching Percent Similarity: 66.67      Matching Percent Identity: 12  
Total Percent Similarity: 66.67      Total Percent Identity: 50.00  
Gaps: 0  
Alignment:  
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAlaPro      38  
1562 AGGGAACACACCCAGATGTGTCTCAGGCGCTCTCCA      1527  
Sequence name: rngp2ndb: AAD13023  
Sequence documentation:  
ID AAD13023 standard; cDNA; 2043 BP.  
XX  
XX AAD13023;  
XX  
XX 23-OCT-2001 (first entry)  
XX  
XX Murine aspartyl protease 2a (murine Asp2a) cDNA.  
XX  
XX Mouse; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;  
XX beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;  
XX neurofibrillary tangle; neuronal loss; amyloid-beta peptide; nootropic;  
XX neuroprotective; antisense therapy; gene therapy; ss.  
XX  
XX Mus musculus.  
XX  
XX  
XX Key      Location/Qualifiers  
XX CDS      1..1506  
XX FT      /\*tag= a  
XX PT      /product= "Murine aspartyl protease 2a"  
XX  
XX MO200150829-A2.  
XX  
XX 19-JUL-2001.

XX 09-MAY-2001; 2001MO-IB000799.  
XX  
XX 09-MAY-2001; 2001MO-IB000799.  
XX  
XX (BIEN/) BIENKOWSKI M J.  
XX (GURN/) GURNEY M E.  
XX (HEIN/) HEINRIKSON R L.  
XX (PARO/) PARODI L A.  
XX (YANR/) YAN R.  
XX  
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;  
XX WPI; 2001-483072/52.  
XX P-PSDB; AAE06861.  
XX  
XX Novel purified polypeptide comprising fragment of mammalian aspartyl  
XX protease 2, lacking Asp2 transmembrane domain and retaining beta  
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2  
XX activity.  
XX  
XX Claim 26; Fig 4; 185pp; English.  
XX  
XX The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid  
XX precursor protein (APP) isoforms and their corresponding DNA molecules.  
XX Human aspartyl proteases can act as beta-secretase proteases useful for  
XX treating Alzheimer's disease. APP isoforms are useful for identifying  
XX modulators of amyloid-beta peptide production, for use in designing  
XX therapeutics for the treatment and prevention of Alzheimer's disease,  
XX dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis  
XX and neuronal loss. APP isoforms are also used in methods for identifying  
XX inhibitors and modulators of human Asp2 activity. The invention relates  
XX to a method for identifying agents that modulate the activity of human  
XX aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
XX as a means to screen in cellular assays for the inhibitors of beta- and  
XX gamma-secretase. Hu-Asp DNA fragments are useful as probes or primers in  
XX polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
XX Asp nucleic acids in in vitro assays and in Northern and Southern blots.  
XX The present cDNA sequence encodes murine aspartyl protease 2 (murine  
XX Asp2), a 'long' form designated as (murine Asp2a) related to the  
XX invention  
SQ Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x AAD13023 ..  
Alignment segment 1/1: (-)  
Matching length: 27.00      Total length: 280  
Matching Percent Similarity: 66.67      Matching Percent Identity: 12  
Total Percent Similarity: 66.67      Total Percent Identity: 50.00  
Gaps: 0  
Alignment:  
27 ArgLeuProLeuArgSerGlyLeuGlyGlyAlaPro      38  
1562 AGGGAACACACCCAGATGTGTCTCAGGCGCTCTCCA      1527  
Sequence name: rngp2ndb: AAD06741  
Sequence documentation:  
ID AAD06741 standard; cDNA; 2043 BP.  
XX  
XX AAD06741;  
XX  
XX 10-AUG-2001 (first entry)  
XX  
XX Murine aspartyl protease 2a (Asp2a) cDNA.  
XX  
XX Murine; alpha-secretase; amyloid precursor protein; APP; therapy;  
XX Alzheimer's disease; antiAlzheimer's; aspartyl protease 2a; Asp 2a;  
XX



1562 AGGAAACCAACCAGATGTGTCACAGGCGCTCTCCA

1527

Sequence name: rngp2ndb:ABL52459

Sequence documentation:  
ID ABL52459 standard; cDNA; 2043 BP.

AC ABL52459;  
XX  
XX 16-UTR-2002 (first entry)  
DT

DE Mouse Asp-2(a) nucleotide sequence SEQ ID NO.7.

XX Mouse; Asp-1; Asp-2; aspartyl protease; enzyme; Alzheimer's disease;  
KM proteolytic; gene; ss.

XX Mus musculus.

XX Key Location/Qualifiers  
FH 1.1506  
FT /\*tag= a  
FT /product= "Asp-2(a)"  
FT /note= "aspartyl protease"

XX GB2367060-A.

XX 27-MAR-2002.

XX 29-OCT-2001; 2001GB-00025934.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WC-US020881.

XX 13-OCT-1999; 99US-00415901.

XX 06-DEC-1999; 99US-0169232P.

XX 22-SEP-2000; 2000GB-00023315.

XX (PHAA ) PHARMACIA & UPJOHN CO.

XX PA Bienkowski MJ, Gurney M;

XX WPI; 2002-397167/43.

XX P-PSDB; ABB78592.

XX Human aspartyl protease 1 substrates useful in assays to detect aspartyl

XX protease activity, e.g. for the diagnosis of Alzheimer's disease.

XX Example 3; Fig 4; 182pp; English.

XX The present invention describes a human aspartyl protease 1 (hu-Asp1)

XX substrate (I) which comprises a peptide of no more than 50 amino acids,

XX and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-

XX Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1

XX proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with

XX (1) under acidic conditions; and (b) determining the level of hu-Asp1

XX proteolytic activity; (2) a purified polynucleotide (III) comprising a

XX nucleotide sequence that hybridises under stringent conditions to the non

XX -coding strand complementary to a defined 1804 nucleotide sequence (see

XX ABL52459) where the nucleotide sequence encodes a polypeptide having Asp1

XX domain); (3) a purified polynucleotide (III') comprising a sequence that

XX hybridises under stringent conditions to (III) (the nucleotide sequence that

XX encodes a polypeptide further lacking a pro-peptide domain corresponding

XX to amino acids 23-62 of hu-Asp1 (see ABB78589)); (4) a vector (IV)

XX comprising (III) or (III'), and (5) a host cell (V) transformed or

XX transfected with (III), (III'), and/or (IV). The hu-Asp1 protease

XX substrate (I) may be used as an enzyme substrate in assays to detect

XX aspartyl protease activity, (II) and therefore diagnose diseases

XX associated with aberrant hu-Asp1 expression and activity such as

XX Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while

XX hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present

XX sequence encodes mouse Asp-2(a) from the present invention

SO Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ABL52459 ..

Alignment segment 1/1: (-)

	Quality:	27.00		Total length:	280
Matching	Percent Similarity:	66.67	Matching	Percent Identity:	50.00
Total	Percent Similarity:	66.67	Total	Percent Identity:	50.00
Gaps:		0			

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyGlyAlaPro 38  
1562 AGGAAACCAACCAGATGTGTCACAGGCGCTCTCCA 1527

Sequence name: rngp2ndb:ADJ94319

Sequence documentation:  
ID ADJ94319 standard; cDNA; 2043 BP.

XX ADJ94319;

XX 03-JUN-2004 (first entry)

XX Mouse cDNA encoding aspartyl protease 2b, Asp-2b.

XX Mouse; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);

XX beta secretase; amyloid protein precursor; APP; Alzheimer's disease;

XX neurotropic; neuroprotective; amyloid beta.

XX Mus musculus.

XX US6706485-B1.

XX 16-MAR-2004.

XX 12-APR-2000; 2000US-00548376.

XX 24-SEP-1998; 98US-0101594P.

XX 23-SEP-1999; 99US-00404133.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WC-US020881.

XX 13-OCT-1999; 99US-00415901.

XX (PHAA ) PHARMACIA & UPJOHN CO.

XX PA Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2004-236722/22.

XX P-PSDB; ADJ94320.

XX Identifying agents that modulate activity of Asp2 aspartyl protease

XX useful for treating or preventing Alzheimer's disease involve comparing

XX APP processing activity of protease in presence and absence of test

XX agent.

XX Example 3; SEQ ID NO 7; 109pp; English.

XX The invention relates to identifying agents that modulate activity of

XX Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,

XX encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid

XX precursor protein (APP) in the presence and absence of a test agent,

XX where Asp2 is a recombinant polypeptide and processes APP into amyloid

XX beta, determining APP processing activity of Asp2 in presence and absence

XX of the test agent, and comparing the activities to identify agents that

XX modulate the activity of Asp2. Also disclosed are the cDNA and proteins

XX for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the

XX nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising

XX the vector and the method of producing Hu-Asp polypeptide, an isolated

XX antibody that specifically binds to Hu-Asp polypeptides, identifying a

cell that can be used to screen for inhibitors of beta secretase activity, novel isoforms of amyloid protein precursor (APP), where the last 2 carboxy terminal amino acids of that isoform are both lysine residues (e.g. those designated APP695-KK or carrying the Swedish mutation where KM at 595-596 is mutated to NL, designated e.g. APP695-SW or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful for assaying for beta secretase activity and screening for inhibitors of beta-secretase) and polynucleotides that encode the APP protein. The method is useful for identifying agents that modulate the activity (amyloid precursor protein processing activity) of APP2 aspartyl protease. Preferably, the method is useful for identifying agents that inhibit APP2 aspartyl protease activity. The inhibitors of amyloid precursor protein processing, are useful for treating or preventing Alzheimer's disease. The present sequence encodes an aspartyl protease of the invention.

Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ94319 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	280
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38  
 1562 AGGGAACCAACCAGATGTGTCCAGGGGCGTCTCCA 1527

Sequence name: rngp2ndb:AD050415

Sequence documentation:

ID AD050415 standard; cDNA; 2043 BP.

AC AD050415;

DT 29-JUL-2004 (first entry)

DE Murine aspartyl protease (Asp)-2 cDNA.

KM Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;

KW Alzheimer's disease; gene therapy; murine; gene; ss.

OS Mus musculus.

XX Key Location/Qualifiers

FT CDS 1..1506

FT /tag= a

FT /product= "Murine aspartyl protease (Asp)-2"

PN US6737510-B1.

PD 18-MAY-2004.

PF 12-APR-2000; 2000US-00548373.

PR 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WD-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PNUA) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2004-387112/36.

XX P-PSDB; AD050416.

XX New APP2 aspartyl protease protein comprising tripeptides DTG and DSG  
 PT involved in processing amyloid precursor protein into amyloid beta,  
 PT useful in preparing a composition for treating or preventing Alzheimer's  
 PT disease.

PS Example 3; SEQ ID NO 7; 108bp; English.

CC The invention relates to a method for identifying an agent that decreases  
 CC the protease activity of the aspartyl protease (Asp) polypeptide. It also  
 CC provides enzyme and enzymatic procedures for cleaving the beta secretase  
 CC cleavage site of the amyloid precursor protein (APP). The invention is  
 CC useful in preparing a composition for treating or preventing Alzheimer's  
 CC disease. It is also useful in gene therapy. The present sequence is  
 CC murine Asp-2 cDNA. This sequence is used to illustrate the method of the  
 CC invention.

Sequence 2043 BP; 453 A; 572 C; 572 G; 446 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050415 ..

Alignment segment 1/1: (-)

Quality:	27.00	Score:	280
Matching length:	12	Total length:	12
Matching Percent Similarity:	66.67	Matching Percent Identity:	50.00
Total Percent Similarity:	66.67	Total Percent Identity:	50.00
Gaps:	0		

Alignment:

27 ArgLeuProLeuArgSerGlyLeuGlyAlaPro 38  
 1562 AGGGAACCAACCAGATGTGTCCAGGGGCGTCTCCA 1527

Sequence name: rngp2ndb:ADR75328

Sequence documentation:

ID ADR75328 standard; cDNA; 2043 BP.

AC ADR75328;

DT 18-NOV-2004 (first entry)

DE Murine aspartyl protease (Asp)-2 cDNA.

KM Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;

KW chromosome identification; Alzheimer's disease; murine; gene; ss.

OS Mus musculus.

XX Key Location/Qualifiers

FT CDS 1..1506

FT /tag= a

FT /product= "Murine aspartyl protease (Asp)-2"

PN US2004166507-A1.

PD 26-AUG-2004.

PF 29-AUG-2003; 2003US-00652045.

PR 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (GURN) GURNEY M E

XX (BIEN) BIENKOWSKI M J

XX (HEIN) HEINRIKSON R L

XX (PARO) PARODI L A

XX (YANR) YAN R



```

PF 09-MAY-2001; 2001WO-1B000797.
XX
XX 09-MAY-2001; 2001WO-1B000797.
XX
XX (BIEN/) BIENKOWSKI M J.
XX (GURNEY/) GURNEY M E.
XX (HEIN/) HEINRIKSON R L.
XX (PARO/) PARODI L A.
XX (YANR/) YAN R.
XX
XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;
XX WPI; 2001-502548/55.
XX P-PSDB; AAU07214.
XX
XX Novel purified polypeptide comprising fragment of mammalian aspartyl
XX protease 2, lacking Asp2 transmembrane domain and retaining beta
XX secretase activity of Asp2 useful for identifying inhibitors of Asp2
XX activity.
XX
XX Example 9; Page 158; 185pp; English.
XX
XX The invention relates to a novel purified polypeptide comprising a
XX fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the
XX Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide
XX and the fragment retain the beta-secretase activity of the mammalian Asp2
XX protein. Also included is an isoform of amyloid protein precursor (APP)
XX comprising the amino acid sequence of a APP or its fragment containing an
XX APP cleavage site recognizable by a mammalian beta-secretase, and further
XX comprising two lysine residues at the carboxyl terminus of the amino acid
XX sequence of the mammalian APP or APP fragment. The polypeptides are used
XX for assaying for modulators of beta-secretase activity; identifying
XX agents that inhibit the APP processing activity of human Asp2 aspartyl
XX protease (Hu-Asp2); identifying agents that modulate the activity of Asp2
XX, and for reducing cellular production of amyloid beta (Abeta) from APP.
XX Agents identified by the above methods are useful for treating
XX Alzheimer's disease; and for identifying modulators of amyloid-beta
XX (Abeta) peptide production, for use in designing therapeutics for the
XX treatment or prevention of Alzheimer's disease. Probes and primers
XX derived from Asp nucleic acid sequences are useful for detecting Hu-Asp
XX nucleic acids in in vitro assays and in Northern and Southern blots. The
XX present sequence represents the coding sequence of T7-caspase-caspase 8-
XX human-Asp-2a delta TM construct which has a T7 tag, a caspase 8 leader
XX sequence and cleavage site, and lacks the transmembrane domain. This
XX construct was used for bacterial expression and purification of human
XX Asp2a. (Updated on 11-SEP-2003 to standardise OS field)
XX
XX Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAS11714 ..
XX
XX Alignment segment 1/1: (-)
XX
XX      Quality: 26.00      Score: 283
XX      Matching length: 8      Total length: 8
XX      Matching Percent Similarity: 87.50      Matching Percent Identity: 62.50
XX      Total Percent Similarity: 87.50      Total Percent Identity: 62.50
XX      Gaps: 0
XX
XX Alignment:
XX
XX 31 ArgSerGlyLeuGlyGlyAlaPro      38
XX ||||| ||||| ||||| ||||| |||||
XX 242 AGCAAGCGGCGGCGGCGAGCACCC      219
XX
XX Sequence name: rngp2nrb:AAD17877
XX
XX Sequence documentation:
XX ID AAD17877 standard; CDNA; 1278 BP.
XX
XX AAD17877;
XX
XX 10-DEC-2001 (first entry)

```

```

XX DE T7-Caspase-Caspase 8 cleavage-human-pro-Asp2(a) lacking TM domain cDNA.
XX
XX Human; aspartyl protease 1; Asp1; amyloid precursor protein; APP;
XX Alzheimer's disease; AD; dementia; neurofibrillary tangle; gliosis;
XX amyloid plaque; neuronal loss; proteolytic; neurotrophic; neuroprotective;
XX T7-Caspase-Caspase 8 cleavage-Human-pro-Asp 2(a) protein; ss.
XX
XX Homo sapiens.
XX OS
XX Synthetic.
XX
XX Key      Location/Qualifiers
XX CDS      1..1278
XX          /tag=a
XX          /product="T7-Caspase-Caspase 8 cleavage-Human-pro- Asp
XX          2(a) protein lacking transmembrane domain"
XX
XX GB257767-A.
XX
XX 04-JUL-2001.
XX
XX 22-SEP-2000; 2000GB-00023315.
XX
XX 23-SEP-1999; 99US-00404133.
XX 23-SEP-1999; 99US-0155493P.
XX 23-SEP-1999; 99WO-US020881.
XX 13-OCT-1999; 99US-00416901.
XX 06-DEC-1999; 99US-0169232P.
XX
XX (PHMA ) PHARMACIA & UPJOHN CO.
XX
XX Bienkowski MJ, Gurney M;
XX WPI; 2001-444208/48.
XX P-PSDB; AAE10641.
XX
XX Polypeptide comprising fragments of human aspartyl protease with amyloid
XX precursor protein processing activity and alpha-secretase activity, for
XX identifying modulators useful in treating Alzheimer's disease.
XX
XX Example 9; Page 128; 187pp; English.
XX
XX The patent discloses human aspartyl protease 1 (hu-Asp1) or modified Asp1
XX proteins which lack transmembrane domain or amino terminal domain or
XX cytoplasmic domain and retains alpha-secretase activity and amyloid
XX protein precursor (APP) processing activity. The proteins of the
XX invention are useful for assaying hu-Asp1 alpha-secretase activity, which
XX in turn is useful for identifying modulators of hu-Asp1 alpha-secretase
XX activity, where modulators that increase hu-Asp1 alpha-secretase activity
XX are useful for treating Alzheimer's disease (AD) which causes progressive
XX dementia with consequent formation of amyloid plaques, neurofibrillary
XX tangles, gliosis and neuronal loss. Hu-Asp1 protease substrate is useful
XX for assaying hu-Asp1 proteolytic activity, by contacting hu-Asp1 protein
XX with the substrate under acidic conditions and determining the level of
XX hu-Asp1 proteolytic activity. The present sequence is a cDNA encoding T7-
XX Caspase-Caspase 8 cleavage-human-pro-Asp 2(a) protein lacking a
XX transmembrane (TM) domain which is generated from human Asp 2(a) protein
XX by the addition of T7 tag and caspase 8 leader sequence at its N-terminal
XX end and deletion of its C-terminal transmembrane domain
XX
XX Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;
XX
XX Alignment of: us-10-726-967a-1 x AAD17877 ..
XX
XX Alignment segment 1/1: (-)
XX
XX      Quality: 26.00      Score: 283
XX      Matching length: 8      Total length: 8
XX      Matching Percent Similarity: 87.50      Matching Percent Identity: 62.50
XX      Total Percent Similarity: 87.50      Total Percent Identity: 62.50
XX      Gaps: 0
XX
XX Alignment:

```

31 ArgSerGlyLeuGlyGlyAlaPro  
 |||:::|||||  
 242 AGGAAAGGGGTGGGGGACACCC

38  
 219

Sequence name: rngp2ndb:AAD13033

Sequence documentation:

ID AAD13033 standard; cDNA; 1278 BP.

AC AAD13033;

DT 23-OCT-2001 (first entry)

XX T7-Caspase-Caspase 8 cleavage-human-pro-Asp2(a) deltaTM protein cDNA.

XX Human; aspartyl protease 2a; Asp 2a; beta-amyloid precursor protein; APP;  
 KW beta-secretase; Alzheimer's disease; dementia; amyloid plaque; gliosis;  
 KM neurofibrillary tangle; neuronal loss; amyloid-beta peptide; neurotropic;  
 KM neuroprotective; antisense therapy; gene therapy;  
 KM caspase-caspase 8 cleavage-pro-Asp2(a) deltaTM protein; ss.

XX Homo sapiens.  
 OS Synthetic.

XX Key Location/Qualifiers  
 FH CDS 1..1278  
 FT /\*tag= a  
 FT /product= "T7-Caspase-Caspase 8 cleavage-Human-pro-  
 FT Asp2(a) deltaTM protein"

XX WO200150829-A2.

XX 19-JUL-2001.

XX 09-MAY-2001; 2001WO-1B000799.

XX 09-MAY-2001; 2001WO-1B000799.

XX (BIEN/) BIENKOWSKI M J.  
 PA (GURNEY/) GURNEY M E.  
 PA (HEIN/) HEINRIKSON R L.  
 PA (PARO/) PARODI L A.  
 PA (YANR/) YAN R.

XX Bienkowski MJ, Gurney ME, Heinrichson RL, Parodi LA, Yan R;

XX WPI; 2001-483072/52.

XX P-PSDB; AAE06871.

XX Novel purified polypeptide comprising fragment of mammalian aspartyl  
 PT protease 2, lacking Asp2 transmembrane domain and retaining beta  
 PT secretase activity of Asp2 useful for identifying inhibitors of Asp2  
 PT activity.

XX Example 9; Page 158; 185pp; English.

XX The invention relates to human aspartyl proteases (hu-Asp), beta-amyloid  
 CC precursor protein (APP) isoforms and their corresponding DNA molecules.  
 CC Human aspartyl proteases can act as beta-secretase proteases useful for  
 CC treating Alzheimer's disease. APP isoforms are useful for identifying  
 CC modulators of amyloid-beta peptide production, for use in designing  
 CC therapeutics for the treatment and prevention of Alzheimer's disease,  
 CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis  
 CC and neuronal loss. APP isoforms are also used in methods for identifying  
 CC inhibitors and modulators of human Asp2 activity. The invention relates  
 CC to a method for identifying agents that modulate the activity of human  
 CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used  
 CC as a means to screen in cellular assays for the inhibitors of beta- and  
 CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in  
 CC polymerase chain reactions (PCR). The probes are useful for detecting Hu-  
 CC Asp nucleic acids in in vitro assays and in Northern and Southern blots.  
 CC The present cDNA sequence encodes T7-Caspase-Caspase 8 cleavage- Human-

CC pro-aspartyl protease 2a (Asp2a) deltaTM protein which is obtained by the  
 CC addition of T7 tag and caspase 8 leader sequence at the N-terminal end  
 CC and deletion of the transmembrane domain at the C-terminal end of Hu-  
 CC Asp2a. Human Asp2a has beta-secretase activity  
 XX  
 XX Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AAD13033 ..

Alignment segment 1/1: (-)

Matching	Percent Similarity:	87.50	Matching	Percent Identity:	62.50
Total	Percent Similarity:	87.50	Total	Percent Identity:	62.50
Gaps:		0			

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
 |||:::|||||  
 242 AGGAAAGGGGTGGGGGACACCC

38  
 219

Sequence name: rngp2ndb:AAD06751

Sequence documentation:

ID AAD06751 standard; cDNA; 1278 BP.

AC AAD06751;

DT 10-AUG-2001 (first entry)

XX T7-Caspase-Caspase 8-cleavage-human-pro-Asp-2(a) delta TM protein cDNA.  
 XX Human; alpha-secretase; amyloid precursor protein; APP; therapy;  
 KM Alzheimer's disease; antialzheimer's; aspartyl protease 2a; Asp2a;  
 KM beta-secretase; caspase-caspase 8-Asp-2a delta TM; ss.

XX Homo sapiens.  
 OS Synthetic.

XX Key Location/Qualifiers  
 FH CDS 1..1278  
 FT /\*tag= a  
 FT /product= "T7-Caspase-Caspase 8-cleavage-human-pro- Asp-  
 FT 2(a) delta TM protein"

XX WO200123533-A2.

XX 05-APR-2001.

XX 22-SEP-2000; 2000WO-US026080.

XX 23-SEP-1999; 99US-0155493P.

XX 23-SEP-1999; 99WO-US020881.

XX 13-OCT-1999; 99US-00416901.

XX 06-DEC-1999; 99US-0169232P.

XX (PHAA ) PHARMACIA & UPJOHN CO.

XX Gurney M, Bienkowski MJ;

XX WPI; 2001-290516/30.

XX P-PSDB; AAE02593.

XX Enzymes that cleave the alpha-secretase site of the amyloid precursor  
 PT protein, useful for the treatment of Alzheimer's disease.

XX Example 9; Page 157; 189pp; English.

XX The present invention relates to enzymes for cleaving the alpha-  
 CC secretase site of the amyloid precursor protein (APP) and methods of  
 CC identifying those enzymes. The methods may be used to identify enzymes





FT CDS 1..1278  
 FT /tag= a  
 FT /product= "T7-caspase-caspase 8 cleavage-human-pro- Asp-  
 FT 2(a)deltaTM"  
 XX GB2367060-A.  
 XX  
 XX  
 PD 27-MAR-2002.  
 XX  
 PF 29-OCT-2001; 2001GB-00025934.  
 XX  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99WO-US020881.  
 PR 13-OCT-1999; 99US-00415901.  
 PR 06-DEC-1999; 99US-0169232P.  
 PR 22-SEP-2000; 2000GB-00023315.  
 XX  
 XX (PHMA ) PHARMACIA & UPJOHN CO.  
 XX  
 PI Bienkowski MJ, Gurney M;  
 DR WPI; 2002-397167/43.  
 DR P-PSDB; ABB78602.  
 XX  
 PT Human aspartyl protease 1 substrates useful in assays to detect aspartyl  
 PT protease activity, e.g. for the diagnosis of Alzheimer's disease.  
 XX  
 PS Example 9; Page 128; 182pp; English.  
 XX  
 XX The present invention describes a human aspartyl protease 1 (hu-Asp1)  
 CC substrate (I) which comprises a peptide of no more than 50 amino acids,  
 CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-  
 CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Asp1  
 CC proteolytic activity, comprising: (a) contacting a hu-Asp1 protein with  
 CC (I) under acidic conditions; and (b) determining the level of hu-Asp1  
 CC proteolytic activity; (2) a purified polynucleotide (III) comprising a  
 CC nucleotide sequence that hybridises under stringent conditions to the non-  
 CC coding strand complementary to a defined 1804 nucleotide sequence (see  
 CC AB25456) where the nucleotide sequence encodes a polypeptide having Asp1  
 CC domain; (3) a purified polynucleotide (III') comprising a sequence that  
 CC hybridises under stringent conditions to (III) (the nucleotide sequence  
 CC encodes a polypeptide further lacking a pro-peptide domain corresponding  
 CC to amino acids 23-62 of hu-Asp1 (see ABB78583)); (4) a vector (IV)  
 CC comprising (III) or (III'); and (5) a host cell (V) transformed or  
 CC transfected with (III), (III'), and/or (IV). The hu-Asp1 protease  
 CC substrate (I) may be used as an enzyme substrate in assays to detect  
 CC aspartyl protease activity, (II) and therefore diagnose diseases  
 CC associated with aberrant hu-Asp1 expression and activity such as  
 CC Alzheimer's disease. Hu-Asp1 has been localised to chromosome 21, while  
 CC hu-Asp2 has been localised to chromosome 11q23.3-24.1. The present  
 CC sequence encodes T7-caspase-caspase 8 cleavage-human-pro-Asp-2(a)deltaTM,  
 CC which is given in an example from the present invention  
 XX  
 SO Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ABUS2469 ..  
 Alignment segment 1/1: (-)  
 Matching length: 26.00  
 Matching Percent: 87.50  
 Total Similarity: 87.50  
 Gaps: 0  
 Total Percent Identity: 62.50  
 Alignment:  
 31 ArgserglyleuglyglyAlaPro 283  
 |||::||| |||::||| |||  
 242 AGGAAAGGCGGTGGCGGCGACGCC 219

Sequence name: rngp2ndb:ADJ94339  
 Sequence documentation:  
 ID ADJ94339 standard; cDNA; 1278 BP.  
 XX  
 AC ADJ94339;  
 XX  
 DT 03-JUN-2004 (first entry)  
 XX  
 DE Human T7-Caspase-Caspase 8 cleavage-human-pro-Asp-2(a)deltaTM cDNA.  
 XX  
 KW Human; ss; gene; aspartyl protease; Asp-1; Asp-2(a); Asp-2(b);  
 KM beta secretase; amyloid protein precursor; APP; Alzheimer's disease;  
 KM neurotropic; neuroprotective; amyloid beta; mutant.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 PN US6706485-B1.  
 XX  
 PD 16-MAR-2004.  
 XX  
 PF 12-APR-2000; 2000US-00548376.  
 XX  
 PR 24-SEP-1998; 98US-0101594P.  
 PR 23-SEP-1999; 99US-00404133.  
 PR 23-SEP-1999; 99US-0155493P.  
 PR 23-SEP-1999; 99WO-US020881.  
 PR 13-OCT-1999; 99US-00415901.  
 XX  
 XX (PHMA ) PHARMACIA & UPJOHN CO.  
 XX  
 PI Gurney ME, Bienkowski MJ, Heinrichson RL, Parodi LA, Yan R;  
 XX  
 XX WPI; 2004-236722/22.  
 DR P-PSDB; ADJ94340.  
 DR  
 XX  
 PT Identifying agents that modulate activity of Asp2 aspartyl protease  
 PT useful for treating or preventing Alzheimer's disease involves comparing  
 PT APP processing activity of protease in presence and absence of test  
 PT agent.  
 XX  
 PS Disclosure; SEQ ID NO 27; 109pp; English.  
 XX  
 CC The invention relates to identifying agents that modulate activity of  
 CC Asp2 (e.g. a beta-secretase, e.g. human Asp-2(b) appearing as ID 6,  
 CC encoded by ID 5) aspartyl protease, involves contacting Asp2 with amyloid  
 CC precursor protein (APP) in the presence and absence of a test agent,  
 CC where Asp2 is a recombinant polypeptide and processes APP into amyloid  
 CC beta, determining APP processing activity of Asp2 in presence and absence  
 CC of the test agent, and comparing the activities to identify agents that  
 CC modulate the activity of Asp2. Also disclosed are the cDNA and proteins  
 CC for human Asp-1 and Asp-2(a), mouse Asp-2(b), a vector comprising the  
 CC nucleic acid encoding Hu-Asp2 protease sequence, a host cell comprising  
 CC the vector and the method of producing Hu-Asp polypeptide, an isolated  
 CC antibody that specifically binds to Hu-Asp polypeptides, identifying a  
 CC cell that can be used to screen for inhibitors of beta secretase  
 CC activity, novel isoforms of amyloid protein precursor (APP), where the  
 CC last 2 carboxy terminus amino acids of that isoform are both lysine  
 CC residues (e.g. those designated APP695-KK or carrying the Swedish  
 CC mutation where KM at 595-596 is mutated to NV, designated e.g. APP695-SW  
 CC or APP695-SW-KK, or a V to F mutation at 642, e.g. APP695-VF, all useful  
 CC for assaying for beta secretase activity and screening for inhibitors of  
 CC beta-secretase) and polynucleotides that encode the APP proteins. The  
 CC method is useful for identifying agents that modulate the activity  
 CC (amyloid precursor protein processing activity) of Asp2 aspartyl  
 CC protease. Preferably, the method is useful for identifying agents that  
 CC inhibit Asp2 aspartyl protease activity. The inhibitors of amyloid  
 CC precursor protein processing, are useful for treating or preventing  
 CC Alzheimer's disease. The present sequence encodes an aspartyl protease  
 CC mutant construct (e.g. lacking a transmembrane domain and/or including a  
 CC caspase cleavage site) used to investigate the cleavage activity of Asp2  
 CC proteins.

XX Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050435 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	283
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

```

31 ArgSerGlyLeuGlyGlyAlaPro      38
|||||:|||||:|||||:|||||
242 AGGAGGGGGTGGGGGGCGACGCC      219

```

Sequence name: rngp2ndb:AD050435

Sequence documentation:

ID AD050435 standard; DNA; 1278 BP.

AC AD050435;

DT 29-JUL-2004 (first entry)

DE T7-Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltatm DNA.

XX Aspartyl protease; Asp; beta secretase; amyloid precursor protein; APP;

KW Alzheimer's disease; gene therapy; caspase; human; gene; chimeric; ds.

XX Homo sapiens.

OS Chimeric.

OS Unidentified.

XX Key

FT CDS

Location/Qualifiers  
1..1278  
/\*tag= a  
/product= "T7-Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltatm protein"

XX US6737510-B1.

PD 18-MAY-2004.

XX 12-APR-2000; 2000US-00548373.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 23-SEP-1999; 99WO-US020881.

PR 13-OCT-1999; 99US-00416901.

XX (PHAA ) PHARMACIA & UPJOHN CO.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2004-387112/36.

DR P-PSDB; AD050436.

XX New Asp2 aspartyl protease protein comprising tripeptides DFG and DSG

XX involved in processing amyloid precursor protein into amyloid beta,

XX useful in preparing a composition for treating or preventing Alzheimer's

XX disease.

XX Example 9; SEQ ID NO 27; 108pp; English.

XX The invention relates to a method for identifying an agent that decreases

XX the protease activity of the aspartyl protease (Asp) polypeptide. It also

XX provides enzyme and enzymatic procedures for cleaving the beta secretase

XX cleavage site of the amyloid precursor protein (APP). The invention is

CC useful in preparing a composition for treating or preventing Alzheimer's

CC disease. It is also useful in gene therapy. The present sequence is T7-

CC Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltatm chimeric DNA. This

CC sequence is used to illustrate the method of the invention.

XX Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x AD050435 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	283
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

```

31 ArgSerGlyLeuGlyGlyAlaPro      38
|||||:|||||:|||||:|||||
242 AGGAGGGGGTGGGGGGCGACGCC      219

```

Sequence name: rngp2ndb:ADR75348

Sequence documentation:

ID ADR75348 standard; DNA; 1278 BP.

AC ADR75348;

DT 18-NOV-2004 (first entry)

DE T7-Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltatm DNA.

XX Aspartyl protease; Asp; amyloid precursor protein; APP; amyloid beta;

KW chromosome identification; Alzheimer's disease; human; caspase; chimeric;

KW gene; ds.

XX Homo sapiens.

OS Chimeric.

OS Unidentified.

XX Key

Location/Qualifiers  
1..1278  
/\*tag= a  
/product= "T7-Caspase-Caspase 8 cleavage-Human-pro-Asp-2(a)deltatm protein"

XX US2004166507-A1.

PD 26-AUG-2004.

XX 29-AUG-2003; 2003US-00652045.

XX 24-SEP-1998; 98US-0101594P.

PR 23-SEP-1999; 99US-00404133.

PR 23-SEP-1999; 99US-0155493P.

PR 13-OCT-1999; 99US-00416901.

XX (GURN/) GURNEY M E.

XX (BIEN/) BIENKOWSKI M J.

XX (HEIN/) HEINRIKSON R L.

XX (PARO/) PARODI L A.

XX (YANR/) YAN R.

XX Gurney ME, Bienkowski MJ, Heinrikson RL, Parodi LA, Yan R;

XX WPI; 2004-624916/60.

DR P-PSDB; ADR75349.

XX Novel purified/isolated polynucleotide encoding polypeptide having

XX aspartyl protease activity involved in processing amyloid precursor

XX protein into amyloid beta, useful in identifying agent decreasing

PT activity of aspartyl protease.  
 XX  
 XX Example 9; SEQ ID NO 27; 107bp; English.  
 CC The invention relates to nucleic acid sequences encoding aspartyl  
 CC protease (asp) polypeptides having aspartyl protease activity involved in  
 CC processing amyloid precursor protein (APP) into amyloid beta. The  
 CC invention also relates to a method for identifying an agent that  
 CC decreases the protease activity of the Asp. Asp DNA is useful in  
 CC chromosome identification as they can hybridise with a specific location  
 CC on a human chromosome and in identifying the relationship between genes  
 CC and diseases (particular gene responsible for causing diseases). It is  
 CC also useful for identifying candidates to modulate the progression of  
 CC Alzheimer's disease. Asp is useful in raising antibodies that are useful  
 CC in diagnostic assay for detecting Hu-asp polypeptide expression. The  
 CC present sequence is the 17-Caspase-Caspase 8 cleavage-Human-pro-asp-  
 CC 2(a)delatATM DNA. This sequence is used to illustrate the method of the  
 CC invention.  
 XX  
 SQ Sequence 1278 BP; 284 A; 356 C; 353 G; 285 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ADR75348 ..  
 Alignment segment 1/1: (-)  

Matching Length:	26.00	Score:	283
Matching Percent:	87.50	Total Length:	8
Total Similarity:	87.50	Matching Percent Identity:	62.50
Gaps:	0	Total Percent Identity:	62.50

 Alignment:  
 31 ArgSerGlyLeuGlyGlyAlaPro 38  
 |||::||| |||::|||  
 242 AGGAAAGGGGTGGGGGCGACGCC 219  
 Sequence name: rng2ndb:ADC81562  
 Sequence documentation:  
 ID ADC81562 standard; DNA; 1365 BP.  
 AC ADC81562;  
 XX  
 DT 01-JAN-2004 (first entry)  
 XX  
 DE Recombinant BACE encoding DNA from pET11a-P33K-BACE SEQ ID NO:8.  
 XX  
 XX human; BACE; modification; Pro33lys; pro-enzyme; gene; ds.  
 XX  
 OS Synthetic.  
 OS Homo sapiens.  
 XX  
 XX Key Location/Qualifiers  
 FH CDS 1..1365  
 FT /tag= b  
 FT /product= "recombinant BACE P33K"  
 FT sig\_peptide 1..69  
 FT /tag= a  
 FT mat\_peptide 70..1365  
 FT /tag= c  
 FT /product= "mature recombinant P33K BACE ((seqid:2))"  
 FT  
 PN WO2003072733-A2.  
 XX  
 PD 04-SEP-2003.  
 XX  
 PF 21-FEB-2003; 2003WO-US005508.  
 XX  
 PR 21-FEB-2002; 2002US-0358651P.  
 XX  
 PA (PHAA ) PHARMACIA & UPJOHN CO.  
 XX

PI Chou K, Howe JM;  
 XX  
 XX WPI; 2003-712719/67.  
 DR P-PSDB; ADC81563, ADC81561.  
 XX  
 XX BACE polypeptides having Pro33lys modification, useful in determining  
 PT possible mutations, which will inhibit enzyme activity, and in  
 PT determining potential active site for target molecules.  
 XX  
 PS Claim 13; Fig 4A-B; 38pp; English.  
 XX  
 XX The present invention describes an isolated polypeptide (1) comprising or  
 CC consisting of a fully defined sequence of 432 amino acids (see ADC81561),  
 CC and comprising human BACE having the modification Pro33lys. Also  
 CC described: (1) a composition comprising an active human BACE enzyme  
 CC comprising the pro-enzyme sequence of BACE having the modification  
 CC Pro33lys; (2) an isolated polynucleotide comprising a sequence encoding  
 CC (1); (3) an isolated polynucleotide consisting or comprising of  
 CC nucleotides 70-1365 of a 1355-bp sequence (see ADC81562); (4) an  
 CC expression vector comprising the polynucleotide of (2), or a  
 CC polynucleotide sequence encoding a Pro33lys-BACE polypeptide, where the  
 CC expression vector can produce the Pro33lys-BACE polypeptide when present  
 CC in a compatible host cell, when cultured under conditions that allow  
 CC production; (5) a recombinant host cell comprising the expression vector;  
 CC and (6) producing a (active) Pro33lys-BACE polypeptide. The BACE  
 CC polypeptide having Pro33lys modification may be used in determining  
 CC possible mutations, which will inhibit enzyme activity, and in  
 CC determining potential active site for target molecules. The vector  
 CC comprising the BACE polynucleotide is useful for producing recombinant  
 CC BACE polypeptides having Pro33lys modification. The present sequence  
 CC encodes recombinant BACE expressed from a pET11a-P33K-BACE construct,  
 CC from the present invention.  
 XX  
 SQ Sequence 1365 BP; 296 A; 382 C; 394 G; 293 T; 0 U; 0 Other;  
 Alignment of: us-10-726-967a-1 x ADC81562 ..  
 Alignment segment 1/1: (-)  

Matching Length:	26.00	Score:	283
Matching Percent:	87.50	Total Length:	8
Total Similarity:	87.50	Matching Percent Identity:	62.50
Gaps:	0	Total Percent Identity:	62.50

 Alignment:  
 31 ArgSerGlyLeuGlyGlyAlaPro 38  
 |||::||| |||::|||  
 332 AGGAAAGGGGTGGGGGCGACGCC 309  
 Sequence name: rng2ndb:ADJ57780  
 Sequence documentation:  
 ID ADJ57780 standard; DNA; 1365 BP.  
 AC ADJ57780;  
 XX  
 DT 06-MAY-2004 (first entry)  
 XX  
 DE DNA sequence for BACE WT R57DEL.  
 XX  
 XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;  
 KW Alzheimer's disease; ds.  
 XX  
 OS Synthetic.  
 OS Homo sapiens.  
 XX  
 XX Key Location/Qualifiers  
 FH CDS 1..1365  
 FT /tag= a  
 FT /product= "BACE protein"  
 FT  
 PN WO2004011641-A2.

XX 05-FEB-2004.  
PD 25-JUL-2003; 2003WO-GB003200.  
XX 26-JUL-2002; 2002US-0398681P.  
XX (ASTE-) ASTEX TECHNOLOGY LTD.  
XX  
XX Vulliamd LMM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;  
XX WPI: 2004-169242/16.  
XX P-PSDB; ADJ57781.  
XX  
XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's  
PT syndrome.  
XX  
XX Discloure; SEQ ID NO 9; 145bp; English.  
XX  
XX The present invention relates to a beta site APP cleaving enzyme (BACE)  
CC protein. The compound or the composition is useful in medicine and the  
CC BACE crystal structure is useful for drug discovery. The BACE protein,  
CC compounds, pharmaceutical compositions, medicament, drug or other  
CC composition comprising the compound is useful for treating or preventing  
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The  
CC present sequence represents the DNA sequence for a BACE encoding  
CC sequence.  
XX  
XX Sequence 1365 BP; 292 A; 392 C; 398 G; 283 T; 0 U; 0 Other;  
SQ  
Alignment of: us-10-726-967a-1 x ADJ57780 ..  
Alignment segment 1/1: (-)  
Matching length: 26.00 Total length: 283  
Matching Percent Similarity: 87.50 Matching Percent Identity: 8  
Total Percent Similarity: 87.50 Total Percent Identity: 62.50  
Gaps: 0  
Alignment:  
31 ArgSerGlyLeuGlyGlyAlaPro 38  
|||::||| |||::||| |||  
329 AGGAAAGGGGTGGGGGCGACGCC 306  
Sequence name: rngp2ndb:ADJ57784  
Sequence documentation:  
ID ADJ57784 standard; DNA; 1368 BP.  
XX ADJ57784;  
XX  
XX 06-MAY-2004 (first entry)  
XX  
XX DNA sequence for BACE N-Q R56KR57KnoH1s.  
XX  
XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;  
XX Alzheimer's disease; ds.  
XX  
XX Synthetic.  
XX  
XX Key Location/Qualifiers  
FT 1..1368  
FT /\*tag= a  
FT /product= "BACE protein"  
XX  
XX WO2004011641-A2.  
XX  
XX 05-FEB-2004.  
XX  
XX 25-JUL-2003; 2003WO-GB003200.  
XX

XX 26-JUL-2002; 2002US-0398681P.  
XX (ASTE-) ASTEX TECHNOLOGY LTD.  
XX  
XX Vulliamd LMM, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;  
XX WPI: 2004-169242/16.  
XX P-PSDB; ADJ57785.  
XX  
XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's  
PT syndrome.  
XX  
XX Discloure; SEQ ID NO 13; 145bp; English.  
XX  
XX The present invention relates to a beta site APP cleaving enzyme (BACE)  
CC protein. The compound or the composition is useful in medicine and the  
CC BACE crystal structure is useful for drug discovery. The BACE protein,  
CC compounds, pharmaceutical compositions, medicament, drug or other  
CC composition comprising the compound is useful for treating or preventing  
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The  
CC present sequence represents the DNA sequence for a BACE encoding  
CC sequence.  
XX  
XX Sequence 1368 BP; 290 A; 392 C; 403 G; 283 T; 0 U; 0 Other;  
SQ  
Alignment of: us-10-726-967a-1 x ADJ57784 ..  
Alignment segment 1/1: (-)  
Matching length: 26.00 Total length: 283  
Matching Percent Similarity: 87.50 Matching Percent Identity: 8  
Total Percent Similarity: 87.50 Total Percent Identity: 62.50  
Gaps: 0  
Alignment:  
31 ArgSerGlyLeuGlyGlyAlaPro 38  
|||::||| |||::||| |||  
332 AGGAAAGGGGTGGGGGCGACGCC 309  
Sequence name: rngp2ndb:ADJ57776  
Sequence documentation:  
ID ADJ57776 standard; DNA; 1368 BP.  
XX ADJ57776;  
XX  
XX 06-MAY-2004 (first entry)  
XX  
XX DNA sequence for BACE WT R56KR57K.  
XX  
XX beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;  
XX Alzheimer's disease; ds.  
XX  
XX Synthetic.  
XX  
XX Key Location/Qualifiers  
FT 1..1368  
FT /\*tag= a  
FT /product= "BACE protein"  
XX  
XX WO2004011641-A2.  
XX  
XX 05-FEB-2004.  
XX  
XX 25-JUL-2003; 2003WO-GB003200.  
XX  
XX 26-JUL-2002; 2002US-0398681P.  
XX  
XX (ASTE-) ASTEX TECHNOLOGY LTD.  
XX

XX Villard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;  
PI MPI; 2004-169242/16.  
DR P-PSDB; ADJ57777.  
XX  
XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's  
PT syndrome.  
XX  
XX Disclosure; SEQ ID NO 5; 145bp; English.  
PS  
XX The present invention relates to a beta site APP cleaving enzyme (BACE)  
CC protein. The compound or the composition is useful in medicine and the  
CC BACE crystal structure is useful for drug discovery. The BACE protein,  
CC compounds, pharmaceutical compositions, medicament, drug or other  
CC composition comprising the compound is useful for treating or preventing  
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The  
CC present sequence represents the DNA sequence for a BACE encoding  
CC sequence.  
SQ Sequence 1368 BP; 295 A; 392 C; 398 G; 283 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ57776 ..  
Alignment segment 1/1: (-)

Quality:	26.00	Score:	283
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
|||::|||::|||::|||  
332 AGGAGGGGCTGGGGCGACGACCC

38  
309

Sequence name: rngp2ndb:ADJ57788

Sequence documentation:

ID ADJ57788 standard; DNA; 1383 BP.

XX AC ADJ57788;

XX DT 06-MAY-2004 (first entry)

XX DE DNA sequence for BACE N-Q R57KDEL.

XX KW beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;

XX KM Alzheimer's disease; ds.

XX OS Synthetic.

XX FH Key Location/Qualifiers

XX FT CDS 1..1383

XX FT /tag= a

XX FT /product= "BACE protein"

XX PN WO2004011641-A2.

XX PD 05-FEB-2004.

XX PF 25-JUL-2003; 2003WO-GB003200.

XX PR 26-JUL-2002; 2002US-0398681P.

XX PA (ASTE-) ASTEX TECHNOLOGY LTD.

XX PI Villard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

XX DR MPI; 2004-169242/16.

DR P-PSDB; ADJ57789.

XX  
XX New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
PT preventing Alzheimer's disease or Alzheimer's-type pathology of Down's  
PT syndrome.  
XX  
XX Disclosure; SEQ ID NO 17; 145bp; English.  
PS

XX The present invention relates to a beta site APP cleaving enzyme (BACE)  
CC protein. The compound or the composition is useful in medicine and the  
CC BACE crystal structure is useful for drug discovery. The BACE protein,  
CC compounds, pharmaceutical compositions, medicament, drug or other  
CC composition comprising the compound is useful for treating or preventing  
CC Alzheimer's disease or Alzheimer's-type pathology of Down's syndrome. The  
CC present sequence represents the DNA sequence for a BACE encoding  
CC sequence.

SQ Sequence 1383 BP; 294 A; 401 C; 402 G; 286 T; 0 U; 0 Other;

Alignment of: us-10-726-967a-1 x ADJ57788 ..

Alignment segment 1/1: (-)

Quality:	26.00	Score:	283
Matching length:	8	Total length:	8
Matching Percent Similarity:	87.50	Matching Percent Identity:	62.50
Total Percent Similarity:	87.50	Total Percent Identity:	62.50
Gaps:	0		

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
|||::|||::|||::|||  
329 AGGAGGGGCTGGGGCGACGACCC

38  
306

Sequence name: rngp2ndb:ADJ57782

Sequence documentation:

ID ADJ57782 standard; DNA; 1386 BP.

XX AC ADJ57782;

XX DT 06-MAY-2004 (first entry)

XX DE DNA sequence for BACE N-Q R56KR57K.

XX KW beta site APP cleaving enzyme; BACE; Nootropic; Neuroprotective;

XX KM Alzheimer's disease; ds.

XX OS Synthetic.

XX FH Key Location/Qualifiers

XX FT CDS 1..1386

XX FT /tag= a

XX FT /product= "BACE protein"

XX PN WO2004011641-A2.

XX PD 05-FEB-2004.

XX PF 25-JUL-2003; 2003WO-GB003200.

XX PR 26-JUL-2002; 2002US-0398681P.

XX PA (ASTE-) ASTEX TECHNOLOGY LTD.

XX PI Villard LMW, Patel SJ, Yon JR, Cleasby A, Hamilton BJ, Shah A;

XX DR MPI; 2004-169242/16.

XX P-PSDB; ADJ57783.  
PT New beta site APP cleaving enzyme (BACE) protein, useful for treating or  
preventing Alzheimer's disease or Alzheimer's-type pathology of Down's

PT syndrome.  
XX Disclousre; SEQ ID NO 11; 145pp; English.  
PS  
XX The present invention relates to a beta site APP cleaving enzyme (BACE)  
CC protein. The compound or the composition is useful in medicine and the  
CC BACE crystal structure is useful for drug discovery. The BACE protein,  
CC compounds, pharmaceutical compositions, medicament, drug or other  
CC composition comprising the compound is useful for treating or preventing  
CC Alzheimer's disease or Alzheimer's s-type pathology of Down's syndrome. The  
CC present sequence represents the DNA sequence for a BACE encoding  
CC sequence.  
XX  
SQ Sequence 1386 BP; 297 A; 401 C; 402 G; 286 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x ADJ57782 ..  
Alignment segment 1/1: (-)  
Quality: 26.00  
Matching Length: 8  
Matching Percent: 87.50  
Total Percent Similarity: 87.50  
Total Percent Identity: 62.50  
Gaps: 0  
Score: 283  
31 ArgSerGlyLeuGlyGlyAlaPro 38  
332 AGGAAAGCGGTCGGGCGCAGCACCC 309  
Sequence name: rngp2ndb:AAV41697  
Sequence documentation:  
ID AAV41697 standard; cDNA; 2370 BP.  
XX AAV41697;  
XX  
XX 26-OCT-1998 (first entry)  
XX  
XX Partial nucleotide sequence of human ASP2 (aspartic protease 2).  
XX  
XX Human; ASP2; aspartic protease 2; agonist; antagonist; immunospecific;  
KW antibody; inhibition; Alzheimer's disease; cancer; proteinase;  
KW prohormone processing; se.  
XX  
OS Homo sapiens.  
XX  
XX  
XX Key Location/Qualifiers  
FT CDS 1..2370  
FT /tag= a  
FT /product= "partial ASP2 protein"  
FT /transl\_except= (pos:2284..2286,aa:Xaa)  
FT /note= "Xaa= unknown"  
FT /transl\_except= (pos:2290..2292,aa:Xaa)  
FT /note= "Xaa= unknown"  
FT /transl\_except= (pos:2308..2310,aa:Xaa)  
FT /note= "Xaa= unknown"  
FT /transl\_except= (pos:2326..2328,aa:Xaa)  
FT /note= "Xaa= unknown"  
FT /transl\_except= (pos:2335..2337,aa:Xaa)  
FT /note= "Xaa= unknown"  
FT /transl\_except= (pos:2338..2340,aa:Xaa)  
FT /note= "Xaa= unknown"  
FT /transl\_except= (pos:2341..2343,aa:Xaa)  
FT /note= "Xaa= unknown"  
FT /transl\_except= (pos:2344..2346,aa:Xaa)  
FT /note= "Xaa= unknown"  
FT /transl\_except= (pos:2350..2352,aa:Xaa)  
FT /note= "Xaa= unknown"  
FT /transl\_except= (pos:2353..2355,aa:Xaa)  
FT /note= "Xaa= unknown"  
FT /transl\_except= (pos:2368..2370,aa:Xaa)

FT /note= "Xaa= unknown"  
FT misc\_feature 1333..1335  
FT /tag= b  
FT /note= "stop codon specified in the protein"  
FT misc\_feature 1474..1476  
FT /tag= c  
FT /note= "stop codon specified in the protein"  
FT misc\_feature 1598..1590  
FT /tag= d  
FT /note= "stop codon specified in the protein"  
FT misc\_feature 1624..1626  
FT /tag= e  
FT /note= "stop codon specified in the protein"  
FT misc\_feature 1816..1818  
FT /tag= f  
FT /note= "stop codon specified in the protein"  
FT misc\_feature 1843..1845  
FT /tag= g  
FT /note= "stop codon specified in the protein"  
FT misc\_feature 1873..1875  
FT /tag= h  
FT /note= "stop codon specified in the protein"  
FT misc\_feature 1891..1893  
FT /tag= i  
FT /note= "stop codon specified in the protein"  
FT misc\_feature 2005..2007  
FT /tag= j  
FT /note= "stop codon specified in the protein"  
FT misc\_feature 2011..2013  
FT /tag= k  
FT /note= "stop codon specified in the protein"  
FT misc\_feature 2029..2031  
FT /tag= l  
FT /note= "stop codon specified in the protein"  
FT misc\_feature 2152..2154  
FT /tag= m  
FT /note= "stop codon specified in the protein"  
FT misc\_feature 2164..2166  
FT /tag= n  
FT /note= "stop codon specified in the protein"  
FT misc\_feature 2179..2181  
FT /tag= o  
FT /note= "stop codon specified in the protein"  
FT misc\_feature 2254..2256  
FT /tag= p  
FT /note= "stop codon specified in the protein"  
FT misc\_feature 2332..2334  
FT /tag= q  
FT /note= "stop codon specified in the protein"  
XX  
XX  
XX BP855444-A2.  
XX  
XX 29-UTL-1998.  
XX  
XX 27-JAN-1998; 98EP-00300573.  
XX  
XX 28-JAN-1997; 97GB-00001684.  
XX  
XX (SMIT ) SMITHKLINE BEECHAM PLC.  
XX (SMIT ) SMITHKLINE BEECHAM CORP.  
XX  
XX Powell DJ, Smith TS, Chapman CG, Murphy K;  
XX WPI; 1998-389809/34.  
XX P-PsDB; AAM59808.  
XX  
XX New nucleic acid encoding human aspartic protease 2 - used to treat,  
XX prevent and diagnose e.g. Alzheimer's disease, cancer and prohormone  
XX processing.  
XX  
XX Disclousre; Page 8-9; 26pp; English.  
XX  
XX This is the nucleotide sequence of the partial human ASP2 (aspartic  
CC

CC protease 2), used in the method of the invention. Agonists and  
CC antagonists for ASP2 immunospecific antibodies are used to treat  
CC conditions requiring increased or decreased activity or expression of  
CC ASP2 respectively. ASP2 is used to treat and diagnose e.g. Alzheimer's  
CC disease, cancer and pro-hormone processing and ASP2 or a fragment can be  
CC used to induce an immune response against the above conditions  
XX

SO Sequence 2370 BP; 579 A; 605 C; 609 G; 561 T; 0 U; 16 Other;

Alignment of: ua-10-726-967a-1 x AA41697 ..

Alignment segment 1/1: (-)

	Quality:	26.00		Score:	283
Matching length:	8		Total length:	8	
Matching Percent Similarity:	87.50		Matching Percent Identity:	62.50	
Total Percent Similarity:	87.50		Total Percent Identity:	62.50	
Gaps:	0				

Alignment:

31 ArgSerGlyLeuGlyGlyAlaPro  
|||::|||::|||::|||::|||  
155 AGGAAGGGGTGGGGGCGACACCC

38  
132

Sequence name: rngp2ndb:AA40939

Sequence documentation:

ID AA40939 standard; cDNA; 2559 BP.

XX AA40939;

DT 17-DEC-2001 (first entry)

XX cDNA encoding novel human enzyme polypeptide #155.

KW Human; oxidoreductase enzyme; transferase; hydrolase; lyase; isomerase;  
KW ligase; hyperproliferative disorder; immunodeficiency disorder;  
KW autoimmune disorder; neurological disorder; metabolic disorder;  
KW inflammatory disorder; cardiovascular disorder; reproductive disorder;  
KW blood-related disorder; infectious disorder; gene therapy; cytostatic;  
KW anti arthritic; nephrotoxic; anticoagulant; ss.

XX Homo sapiens.

XX WO200155301-A2.

PD 02-AUG-2001.

PF 17-JAN-2001; 2001WO-US001239.

XX 31-JAN-2000; 2000US-0179065P.  
PR 04-FEB-2000; 2000US-0180628P.  
PR 24-FEB-2000; 2000US-0184664P.  
PR 02-MAR-2000; 2000US-0186350P.  
PR 16-MAR-2000; 2000US-0189874P.  
PR 17-MAR-2000; 2000US-0190076P.  
PR 18-APR-2000; 2000US-0198123P.  
PR 19-MAY-2000; 2000US-0205515P.  
PR 07-JUN-2000; 2000US-0209467P.  
PR 28-JUN-2000; 2000US-0214886P.  
PR 30-JUN-2000; 2000US-0215135P.  
PR 07-JUL-2000; 2000US-0216447P.  
PR 07-JUL-2000; 2000US-0216880P.  
PR 11-JUL-2000; 2000US-0217487P.  
PR 11-JUL-2000; 2000US-0217496P.  
PR 14-JUL-2000; 2000US-0218290P.  
PR 26-JUL-2000; 2000US-0220963P.  
PR 26-JUL-2000; 2000US-0220964P.  
PR 14-AUG-2000; 2000US-0224518P.  
PR 14-AUG-2000; 2000US-0224519P.  
PR 14-AUG-2000; 2000US-0225213P.  
PR 14-AUG-2000; 2000US-0225214P.

PR 14-AUG-2000; 2000US-0225266P.  
PR 14-AUG-2000; 2000US-0225267P.  
PR 14-AUG-2000; 2000US-0225268P.  
PR 14-AUG-2000; 2000US-0225270P.  
PR 14-AUG-2000; 2000US-0225447P.  
PR 14-AUG-2000; 2000US-0225477P.  
PR 14-AUG-2000; 2000US-0225757P.  
PR 14-AUG-2000; 2000US-0225758P.  
PR 14-AUG-2000; 2000US-0225759P.  
PR 18-AUG-2000; 2000US-0226279P.  
PR 22-AUG-2000; 2000US-0226681P.  
PR 22-AUG-2000; 2000US-0226688P.  
PR 22-AUG-2000; 2000US-0227182P.  
PR 23-AUG-2000; 2000US-0227009P.  
PR 30-AUG-2000; 2000US-0228924P.  
PR 01-SEP-2000; 2000US-0229287P.  
PR 01-SEP-2000; 2000US-0229343P.  
PR 01-SEP-2000; 2000US-0229344P.  
PR 01-SEP-2000; 2000US-0229345P.  
PR 05-SEP-2000; 2000US-0229509P.  
PR 05-SEP-2000; 2000US-0229513P.  
PR 06-SEP-2000; 2000US-0230437P.  
PR 06-SEP-2000; 2000US-0230438P.  
PR 08-SEP-2000; 2000US-0231242P.  
PR 08-SEP-2000; 2000US-0231243P.  
PR 08-SEP-2000; 2000US-0231244P.  
PR 08-SEP-2000; 2000US-0231413P.  
PR 08-SEP-2000; 2000US-0231414P.  
PR 08-SEP-2000; 2000US-0232080P.  
PR 08-SEP-2000; 2000US-0232081P.  
PR 12-SEP-2000; 2000US-0231968P.  
PR 14-SEP-2000; 2000US-0232397P.  
PR 14-SEP-2000; 2000US-0232398P.  
PR 14-SEP-2000; 2000US-0232399P.  
PR 14-SEP-2000; 2000US-0232400P.  
PR 14-SEP-2000; 2000US-0232401P.  
PR 14-SEP-2000; 2000US-0233063P.  
PR 14-SEP-2000; 2000US-0233064P.  
PR 14-SEP-2000; 2000US-0233065P.  
PR 21-SEP-2000; 2000US-0234223P.  
PR 21-SEP-2000; 2000US-0234274P.  
PR 25-SEP-2000; 2000US-0234997P.  
PR 25-SEP-2000; 2000US-0234998P.  
PR 25-SEP-2000; 2000US-0235484P.  
PR 27-SEP-2000; 2000US-0235834P.  
PR 27-SEP-2000; 2000US-0235836P.  
PR 29-SEP-2000; 2000US-0236327P.  
PR 29-SEP-2000; 2000US-0236367P.  
PR 29-SEP-2000; 2000US-0236368P.  
PR 29-SEP-2000; 2000US-0236369P.  
PR 29-SEP-2000; 2000US-0236370P.  
PR 02-OCT-2000; 2000US-0236802P.  
PR 02-OCT-2000; 2000US-0237037P.  
PR 02-OCT-2000; 2000US-0237038P.  
PR 02-OCT-2000; 2000US-0237039P.  
PR 02-OCT-2000; 2000US-0237040P.  
PR 13-OCT-2000; 2000US-0239835P.  
PR 13-OCT-2000; 2000US-0239837P.  
PR 20-OCT-2000; 2000US-0240960P.  
PR 20-OCT-2000; 2000US-0241211P.  
PR 20-OCT-2000; 2000US-0241785P.  
PR 20-OCT-2000; 2000US-0241786P.  
PR 20-OCT-2000; 2000US-0241787P.  
PR 20-OCT-2000; 2000US-0241808P.  
PR 20-OCT-2000; 2000US-0241809P.  
PR 20-OCT-2000; 2000US-0241809P.  
PR 20-OCT-2000; 2000US-0241826P.  
PR 01-NOV-2000; 2000US-0244617P.  
PR 08-NOV-2000; 2000US-0246474P.  
PR 08-NOV-2000; 2000US-0246475P.  
PR 08-NOV-2000; 2000US-0246476P.  
PR 08-NOV-2000; 2000US-0246477P.  
PR 08-NOV-2000; 2000US-0246478P.  
PR 08-NOV-2000; 2000US-0246523P.  
PR 08-NOV-2000; 2000US-0246524P.

PR 08-NOV-2000; 2000US-0246525P.  
PR 08-NOV-2000; 2000US-0246526P.  
PR 08-NOV-2000; 2000US-0246527P.  
PR 08-NOV-2000; 2000US-0246528P.  
PR 08-NOV-2000; 2000US-0246532P.  
PR 08-NOV-2000; 2000US-0246609P.  
PR 08-NOV-2000; 2000US-0246610P.  
PR 08-NOV-2000; 2000US-0246611P.  
PR 08-NOV-2000; 2000US-0246613P.  
PR 17-NOV-2000; 2000US-0249207P.  
PR 17-NOV-2000; 2000US-0249208P.  
PR 17-NOV-2000; 2000US-0249209P.  
PR 17-NOV-2000; 2000US-0249210P.  
PR 17-NOV-2000; 2000US-0249211P.  
PR 17-NOV-2000; 2000US-0249212P.  
PR 17-NOV-2000; 2000US-0249213P.  
PR 17-NOV-2000; 2000US-0249214P.  
PR 17-NOV-2000; 2000US-0249215P.  
PR 17-NOV-2000; 2000US-0249216P.  
PR 17-NOV-2000; 2000US-0249217P.  
PR 17-NOV-2000; 2000US-0249218P.  
PR 17-NOV-2000; 2000US-0249244P.  
PR 17-NOV-2000; 2000US-0249245P.  
PR 17-NOV-2000; 2000US-0249264P.  
PR 17-NOV-2000; 2000US-0249265P.  
PR 17-NOV-2000; 2000US-0249297P.  
PR 17-NOV-2000; 2000US-0249299P.  
PR 17-NOV-2000; 2000US-0249300P.  
PR 01-DEC-2000; 2000US-0250160P.  
PR 01-DEC-2000; 2000US-0250391P.  
PR 05-DEC-2000; 2000US-0251030P.  
PR 05-DEC-2000; 2000US-0251988P.  
PR 05-DEC-2000; 2000US-0256719P.  
PR 06-DEC-2000; 2000US-0251479P.  
PR 08-DEC-2000; 2000US-0251856P.  
PR 08-DEC-2000; 2000US-0251868P.  
PR 08-DEC-2000; 2000US-0251869P.  
PR 08-DEC-2000; 2000US-0251989P.  
PR 08-DEC-2000; 2000US-0251990P.  
PR 11-DEC-2000; 2000US-0254097P.  
PR 05-JAN-2001; 2001US-0259678P.  
PA (HUMA-) HUMAN GENOME SCI INC.  
PI Rosen CA, Barash SC, Ruben SM;  
DR MPI; 2001-465566/50.  
XX P-PSDB; AAU23069.  
XX  
PT Novel polypeptides and polynucleotides useful for diagnosing, preventing,  
PT creating neutral, immune system, muscular, reproductive, pulmonary,  
PT cardiovascular, renal, proliferative disorders and cancerous diseases.  
XX  
XX  
PS Claim 4; SEQ ID NO 165; 1180pp; English.  
XX  
XX The present invention relates to the isolation of novel human enzyme  
CC polypeptides (AAU2915-AAU2314), and the cDNA and genomic sequences  
CC encoding them. The enzyme polypeptides of the invention may comprise the  
CC functional classes of oxidoreductases, transferases, hydrolases, lyases,  
CC isomerases or ligases. The sequences of the invention are useful in the  
CC diagnosis, treatment, prevention and/or prognosis of a wide range of  
CC disorders including hyperproliferative disorders (e.g. cancer),  
CC immunodeficiency disorders (e.g. AIDS) autoimmune disorders (e.g.  
CC arthritis), neurological disorders (e.g. Alzheimer's disease), metabolic  
CC disorders (e.g. phenylketonuria), inflammatory disorders (e.g. asthma),  
CC cardiovascular disorders (e.g. atherosclerosis), blood-related disorders  
CC (e.g. haemophilia), reproductive disorders (e.g. infertility) and  
CC infectious disorders (e.g. influenza). The polynucleotides of the  
CC invention can also be used in gene therapy. AAS40785-AAS41684 represent  
CC cDNA sequences encoding for the novel human enzyme polypeptides of the  
CC invention. Note: The sequence data for this patent did not form part of  
CC the printed specification, but was obtained in electronic format directly  
CC from WIPO at ftp.wipo.int/pub/published\_pct\_sequences

XX  
SQ Sequence 2559 BP; 604 A; 669 C; 667 G; 619 T; 0 U; 0 Other;  
Alignment of: us-10-726-967a-1 x AAS40939 ..  
Alignment segment 1/1: (-)  
Matching Percent 26.00  
Total Percent Similarity: 87.50  
Total Percent Identity: 87.50  
Gaps: 0  
Escore: 283  
Total length: 8  
Matching Percent Identity: 62.50  
Total Percent Identity: 62.50  
Alignment:  
31 ArgSerGlyLeuGlyGlyAlaPro 38  
144 AGGAAAGGGGTGGGGGCGACACCC 121  
Sequence name: rngp2nb:AAS40939  
Sequence documentation:  
ID AAS40939 standard; cDNA; 2559 BP.  
XX  
AC AAS40939;  
XX  
DT 17-DEC-2001 (first entry)  
XX  
DE cDNA encoding novel human enzyme polypeptide #155.  
XX  
XX Human; oxidoreductase enzyme; transferase; hydrolase; lyase; isomerase;  
KW ligase; hyperproliferative disorder; immunodeficiency disorder;  
KW autoimmune disorder; neurological disorder; metabolic disorder;  
KW inflammatory disorder; cardiovascular disorder; reproductive disorder;  
KW blood-related disorder; infectious disorder; gene therapy; cytostatic;  
KW anti arthritic; nephrotropic; anticoagulant; ss.  
XX  
OS Homo sapiens.  
XX  
PN MO200155301-A2.  
XX  
PD 02-AUG-2001.  
XX  
PF 17-JAN-2001; 2001WO-US001239.  
XX  
XX 31-JAN-2000; 2000US-0179065P.  
PR 04-FEB-2000; 2000US-0180628P.  
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PR 17-MAR-2000; 2000US-0190076P.  
PR 18-APR-2000; 2000US-0198123P.  
PR 19-MAY-2000; 2000US-0205515P.  
PR 07-JUN-2000; 2000US-0209467P.  
PR 28-JUN-2000; 2000US-0214686P.  
PR 30-JUN-2000; 2000US-0215135P.  
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PR 08-DEC-2000; 2000US-0251990P.  
PR 11-DEC-2000; 2000US-0254097P.  
PR 05-JAN-2001; 2000US-0259678P.  
  
PA (HUMA-) HUMAN GENOME SCI INC.  
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XX  
PI Rosen CA, Barash SC, Ruben SM;  
XX WPI; 2001-465566/50.  
XX P-PSDB; AAU23069.  
DR  
XX  
PT Novel polypeptides and polynucleotides useful for diagnosing, preventing,  
PT treating neural, immune system, muscular, reproductive, pulmonary,  
PT cardiovascular, renal, proliferative disorders and cancerous diseases.  
XX  
XX  
PS Claim 4; SEQ ID NO 165; 1180bp; English.  
XX  
CC The present invention relates to the isolation of novel human enzyme  
CC polypeptides (AAU22915-AAU23814), and the cDNA and genomic sequences  
CC encoding them. The enzyme polypeptides of the invention may comprise the  
CC functional classes of oxidoreductases, transferases, hydrolases, lyases,  
CC isomerases or ligases. The sequences of the invention are useful in the  
CC diagnosis, treatment, prevention and/or prognosis of a wide range of  
CC disorders, including hyperproliferative disorders (e.g. cancer),  
CC immunodeficiency disorders (e.g. AIDS) autoimmune disorders (e.g.  
CC arthritis), neurological disorders (e.g. Alzheimer's disease), metabolic  
CC disorders (e.g. phenylketonuria), inflammatory disorders (e.g. asthma),  
CC cardiovascular disorders (e.g. atherosclerosis), blood-related disorders  
CC (e.g. haemophilia), reproductive disorders (e.g. infertility) and  
CC infectious disorders (e.g. influenza). The polynucleotides of the  
CC invention can also be used in gene therapy. AA540785-AA541684 represent  
CC cDNA sequences encoding for the novel human enzyme polypeptides of the  
CC invention. Note: The sequence data for this patent did not form part of  
CC the printed specification, but was obtained in electronic format directly  
CC from WIPO at [http://wipo.int/pub/publ/published\\_pct\\_sequences](http://wipo.int/pub/publ/published_pct_sequences)  
XX  
SQ Sequence 2559 BP; 604 A; 669 C; 667 G; 619 T; 0 U; 0 Other;  
  
Alignment of: us-10-726-967a-1 x AA540939 ..  
Alignment segment 1/1: (+)

Quality:	24.00	Score:	289
Matching length:	9	Total length:	9
Matching Percent Similarity:	77.78	Matching Percent Identity:	44.44
Total Percent Similarity:	77.78	Total Percent Identity:	44.44
Gaps:	0		

Alignment:

30	LeuArgSerGlyLeuGlyGlyAlaPro	38
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:		
:		
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1773	GTTCTAGGACGGCAGCGGTGGAAAGGCC	1799